

# A Romano-British Kiln Site at Lower Farm, Nuneham Courtenay, and Other Sites on the Didcot to Oxford and Wootton to Abingdon Water Mains, Oxfordshire

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## SUMMARY

*The Oxford Archaeological Unit undertook a watching brief and several excavations on the route of two Thames Water pipelines, one between Didcot and Oxford and the other between Wootton and Abingdon, during 1991. Three substantial sites were excavated: a Roman settlement at Hadden Hill, near Didcot; a prehistoric and Roman site at Fullamoor Farm, Clifton Hampden; and a Roman industrial site at Lower Farm, Nuneham Courtenay. Only the Fullamoor Farm site was known to have any archaeological potential. The Lower Farm site is of considerable regional and national significance because it represents the first major discovery of an Oxfordshire Roman pottery kiln site since Young's work in the mid-late 1970s.<sup>1</sup> The excavations, and the various smaller sites located during the watching brief, are described. The description and discussion of the Roman pottery from Lower Farm necessarily forms the major element of the report.*

*Pottery manufacture at Lower Farm commenced c. AD 100 and continued up to about the mid 4th century. A wide range of fabrics and forms were produced, including fine wares in the 2nd century, here identified for the first time in the Oxfordshire industry. The scale of production increased considerably in the later 3rd century with the expansion of mortarium output and the introduction of colour-coated wares, but it apparently declined again in the early part of the 4th century. Notable characteristics of the industry included the use of semi-literate potters' stamps on colour-coated vessels.*

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<sup>1</sup> C. J. Young, *The Roman Pottery Industry of the Oxford Region* (BAR 43, 1977). All further footnote references to this publication will be in the format Y [page number]. Text references to forms in Young's corpus will not be footnoted individually.

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The efforts of all the members of the Oxford Archaeological Unit fieldwork and post-excavation departments who participated in the project is gratefully acknowledged. John Moore, Simon Palmer and Ellen McAdam provided the management support without which no project can be completed. The illustrations are the work of Paul Hughes (maps and site drawings) and Gill Hale with Danny Hacker and Erica Hemming (pot drawings, Lower Farm) of the Oxford Archaeological Unit drawing office. Figures 6 and 7 are copyright of the Royal Commission on the Historical Monuments of England; I am grateful to them for permission to reproduce the photographs here.

The text of this report has been produced by various authors. The whole has been edited by Graham Keevill. Authors are named at the start of the relevant sections of text. The introductory text below is the work of Graham Keevill.

## INTRODUCTION

Linear developments such as roads and pipelines present unique problems and opportunities for archaeologists. The problems are largely logistical; contractors will be on site at all hours, and on larger projects will normally have several teams working at once. Furthermore any earth-moving will be done as rapidly as possible, and rarely in a way which is compatible with careful archaeological monitoring. The opportunities, however, generally outweigh such disadvantages. Linear developments often progress through uncharted territory as far as archaeology is concerned. It is therefore possible to study extensive transects of land – and at best whole landscapes – in some detail. Increasingly, the archaeological implications of such projects are a material concern in the early planning stages, and archaeologists are usually consulted from the outset.

Archaeology, however, is scarcely a predictable resource. There is always a chance that new, unsuspected sites will be discovered where linear projects cross areas such as the Thames Valley. Sometimes this happens when construction is so far advanced that nothing can be done to alter the chosen route. It is then necessary to undertake as much excavation as possible before any archaeology is destroyed. This report describes such work on two water pipelines through southern Oxfordshire. Much of the work was relatively mundane, but the discovery of a Roman pottery production site under medieval ridge-and-furrow in the parish of Nuneham Courtenay demonstrated the capacity of such works to make important contributions to the archaeological database.

THE PIPELINES, by G.D. KEEVILL and M.L. HALL.

Two separate Thames Water pipelines were covered by this archaeological project. One consisted of a water main from Didcot to Oxford (Figs. 1 and 2a-c). A shorter main ran from Wootton to the N.W. side of Abingdon (Figs. 1 and 3). The latter had minimal archaeological implications. The few finds are described in the gazetteer.

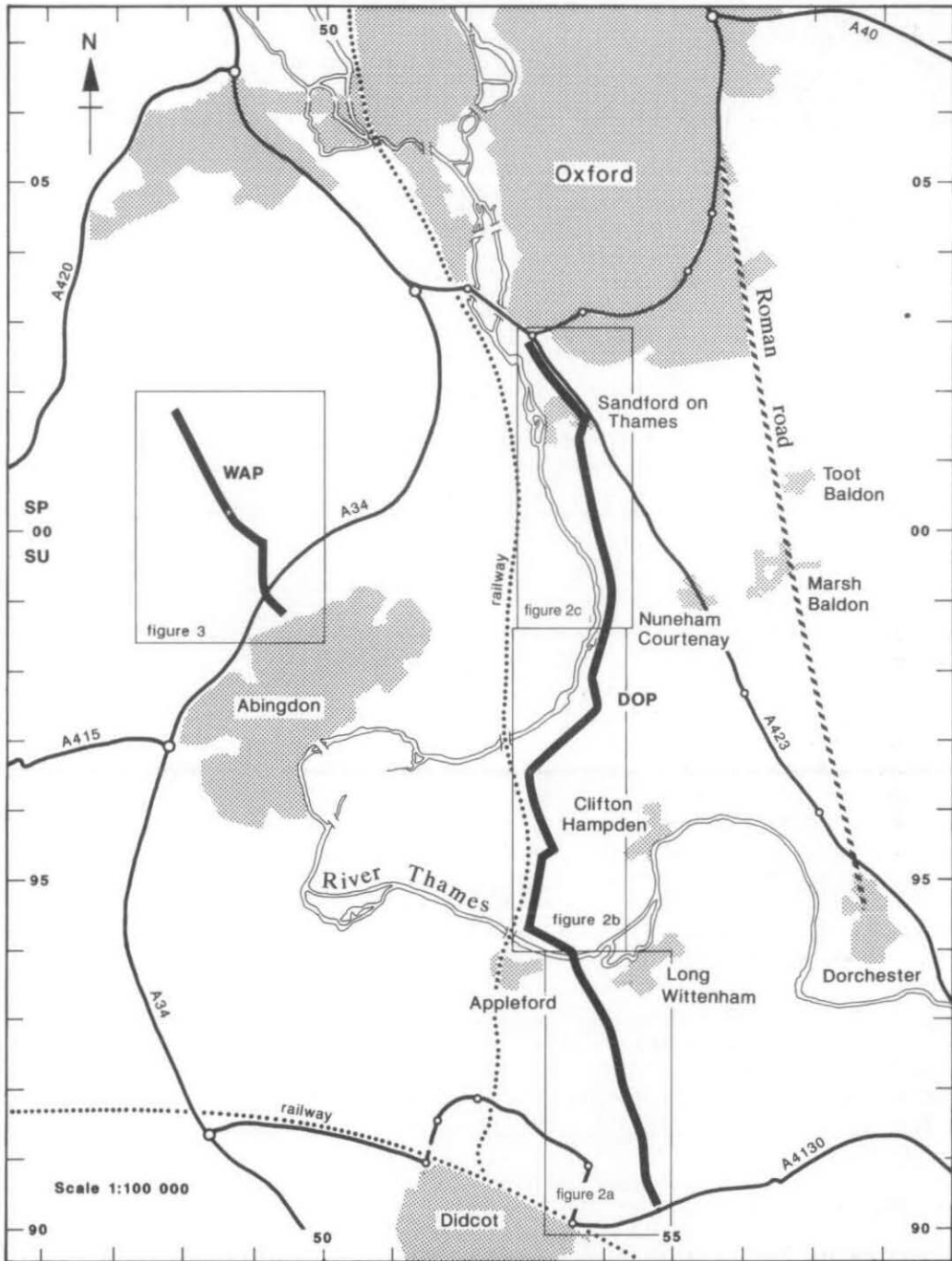


Fig. 1. Location of the Didcot-Oxford and Wootton-Abingdon pipelines.

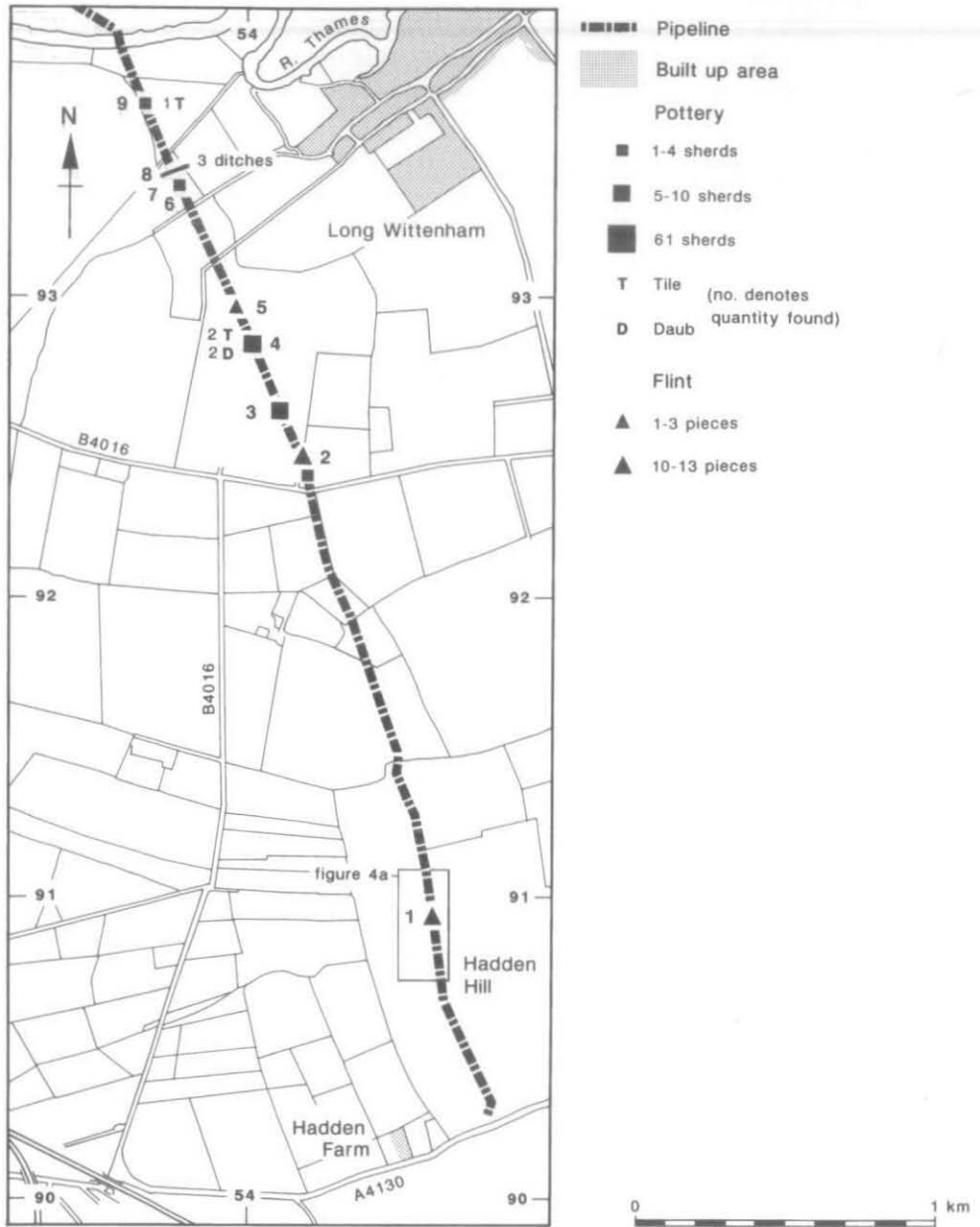
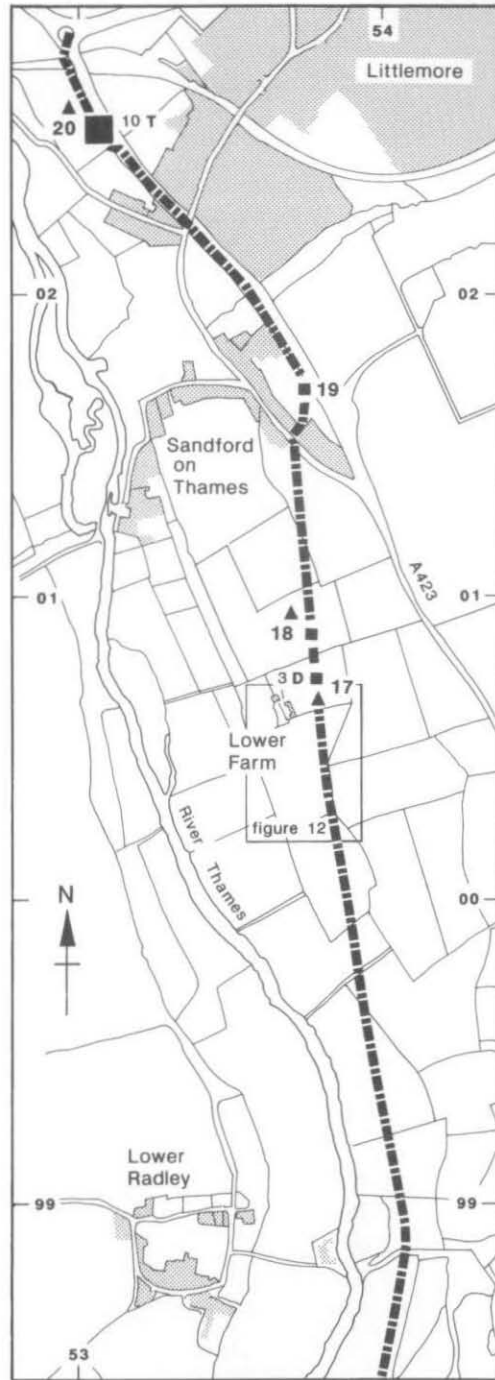
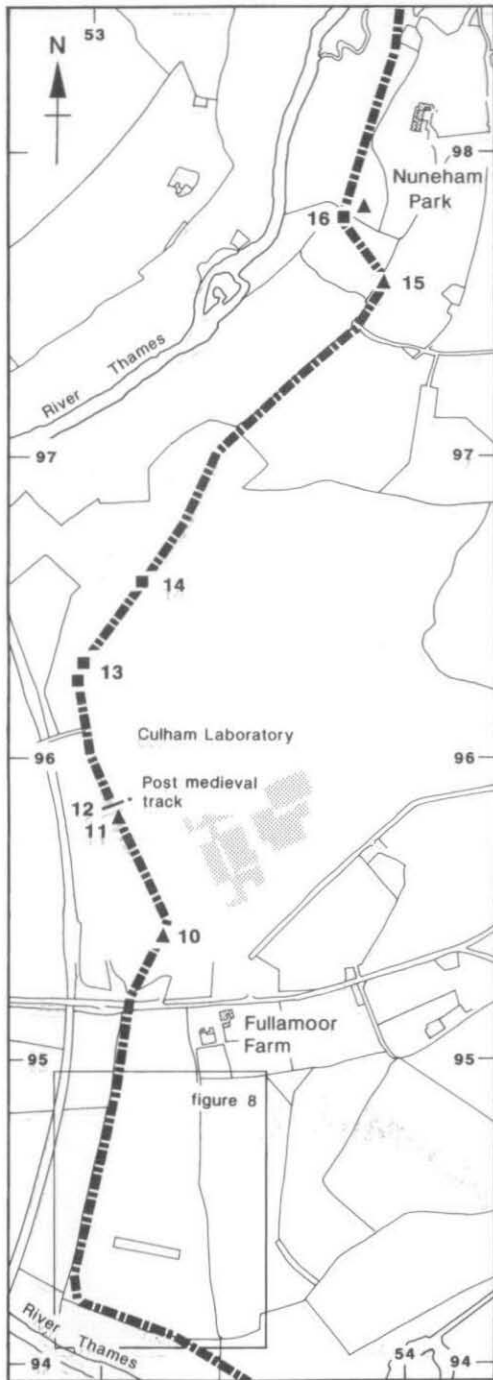


Fig. 2a-c.



Gazetteer of find spots on the Didcot-Oxford pipeline.

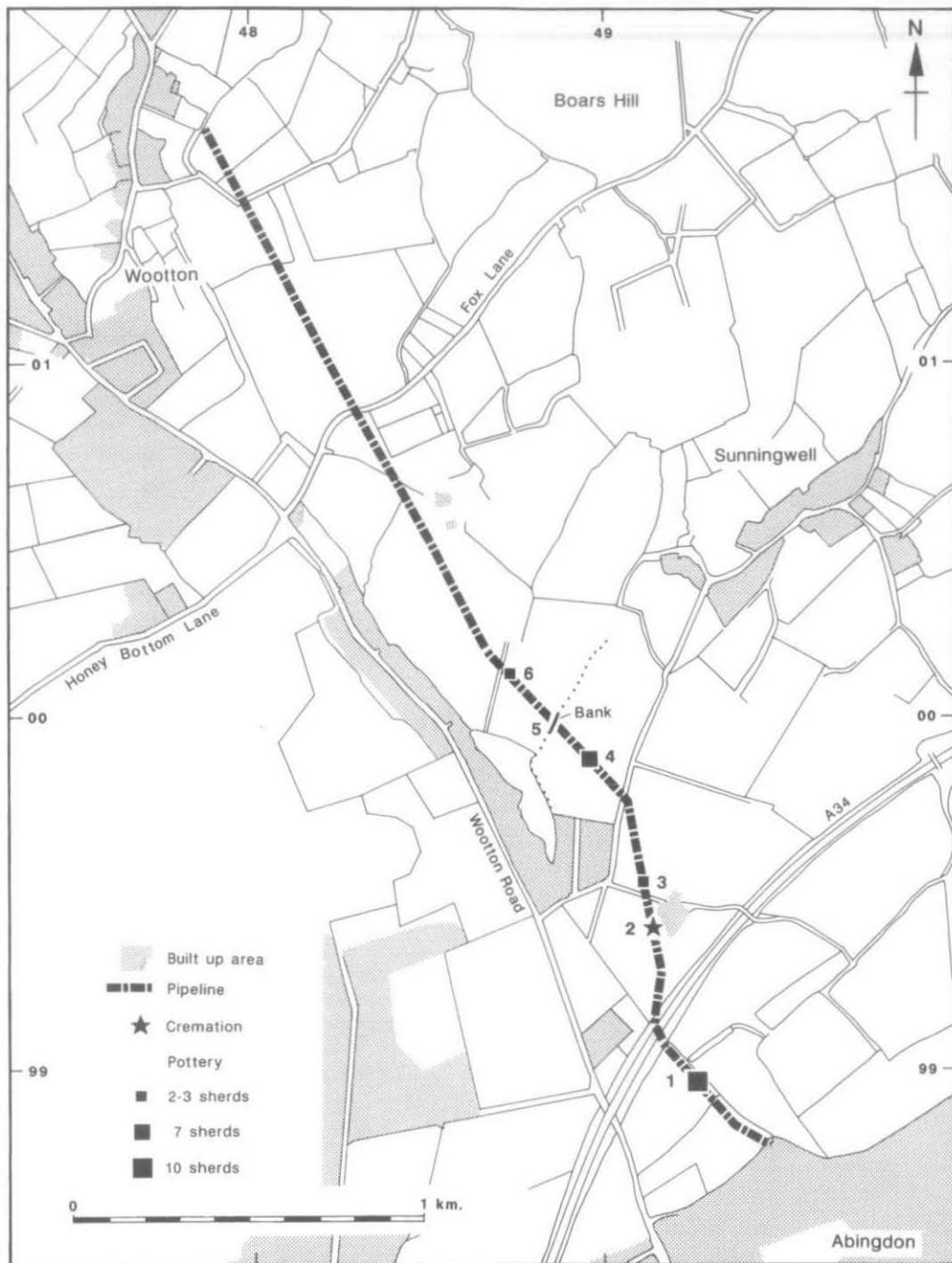


Fig. 3. Gazetteer of find spots on the Wootton-Abingdon pipeline.

The Didcot–Oxford pipeline was designed and constructed by Thames Water Utilities as a major element of the company's strategic supply network in the western part of its operating area. A new borehole source at Gatehampton, near Goring, has been developed to meet growing demand in the South Oxfordshire District. The borehole has been operational since 1990. Archaeological work preceded this development.<sup>2</sup>

A review of water resources in 1989 indicated that additional water would be required in South Oxfordshire by 1993. Two linked schemes were developed to meet this demand, of which the Didcot to Oxford main was a major element.<sup>3</sup> A preliminary study, undertaken by consultant engineers, set out to examine the implications of constructing a 14-km long pipeline between Didcot and Oxford, using 800 mm and 900 mm diameter pipework.

The pipeline could not avoid crossing the Upper Thames Valley, and therefore its route had to be planned in the light of existing archaeological knowledge.<sup>4</sup> The original brief to the consultant engineers required that consultation should take place between the engineers and Oxfordshire County Council's Archaeologist. It was intended that the proposed route should have the minimum possible *predictable* archaeological impact, and that adequate mitigatory measures should be put in place to meet all archaeological issues which might arise during construction.

Areas of known archaeological sensitivity were dominated by the Thames gravels, where aerial survey had long since demonstrated the extraordinary density of cropmark sites in the area, especially to the E. of Abingdon.<sup>5</sup> Elsewhere, much less was known. The Oxfordshire Sites and Monuments Record (SMR) represents the best source of information, and much of the route was chosen on the basis of the distribution of sites and finds on the SMR maps.

In the event, it is arguable that the proposed engineering solution did not take full account of the known archaeological constraints of the pipeline route, especially at Fullamoor Farm. Very recent aerial photographs of the site had identified significant archaeological features which had not been recorded previously. Thames Water had already committed itself to supporting an appropriate level of watching brief and contingency-based archaeological work, but it was apparent that this would not be adequate. Thus commenced the more proactive archaeological campaign which is detailed in this report.

The pipeline routes are shown in general on Figure 1, and in more detail in Figures 2a–c and 3. The 3.5-km Wootton to Abingdon pipeline crossed predominantly flat land. The 14 km Didcot to Oxford route covered a much more varied landscape. It ran from upper greensand hills at the S. end onto the sand and gravel terraces and alluvial floodplains of the Thames, thence crossing the low ridge W. of Nuneham Courtenay and descending onto limestone on the E. bank of the Thames to Littlemore.

The pipelines occupied an easement width of 25 m. Topsoil and/or other overburden layers were removed to a typical depth of 0.25 m over approximately two-thirds of the easement width, while the remaining third was used for spoil heaps. The trench for the pipes was usually 1 m wide, providing just enough room for the pipe to be inserted. The depth of excavation varied considerably, taking account of variations in the localised topography and geology.

<sup>2</sup> T. Allen, 'Goring: Gatehampton Farm', *South Midlands Archaeology*, 19 (1989), 51–2.

<sup>3</sup> See also S. Ford et al, 'Archaeology of the Cleve–Didcot Pipeline, S. Oxon., 1989', *Oxoniensia*, lv (1990), 1–40. This formed the first element of the water supply project, concluded by the Didcot to Oxford main.

<sup>4</sup> D. Benson and D. Miles, *The Upper Thames Valley: an Archaeological Survey of the River Gravels* (1974).

<sup>5</sup> *Ibid.*

## METHODOLOGY – THE WATCHING BRIEF

Observation of the pipeline work was mostly undertaken by Andy Parkinson. Some visits were made by Graham Keevill and Olivia Pierpoint. The entirety of both the Didcot to Oxford and Wootton to Abingdon easements was surveyed in this way during topsoil stripping. Any finds from the topsoil were collected, and searches were made for any archaeological features.

The nature of the pipelining operation created difficulties during the watching brief, as the subsoil was frequently not revealed because of the shallow topsoil strip. Furthermore much of the work was done with a bulldozer so that exposed surfaces often became smeared with disturbed soil. Wherever possible, therefore, the easement was also visited during pipe laying when the dug trench could be examined. The speed of operations, and the fact that several construction gangs were working at the same time, meant that some pipe trench sections were dug without an archaeologist present. Undoubtedly some information will have been lost in this way, but it was felt that the various excavations should have most resources devoted to them (see below).

Whenever possible, features and finds were recorded to the nearest 10 m related to the National Grid, using 1:10,000 Ordnance Survey maps supplied by Thames Water. These maps showed the pipeline route, and details of the land parcels through which it ran. Each land parcel was numbered, and these numbers were adopted as transects analogous to fieldwalking lines. All finds could therefore be collected by transect as the minimum level of record, while the transect number could also be used as a prefix for context numbers. The site archive contains full details of the land parcels.

## METHODOLOGY – THE EXCAVATIONS

The first phase of archaeological work took place at Fullamoor Farm (in Transect 8), Clifton Hampden, in May 1991 before the commencement of construction works. The route here had been set so as to avoid a linear feature and a group of ring ditches shown as cropmarks on aerial photographs.<sup>6</sup> More recent photographs, however, demonstrated the presence of many more features, such as pits and ditches. Five evaluation trenches were therefore excavated in order to determine whether or not this stretch of the pipeline should be fully excavated archaeologically before the pipes were laid. The results were such as to justify such an approach.

The pipeline construction began in June 1991. Access then became available to the entire route. Excavation began almost immediately at Fullamoor Farm, and continued for four weeks. At the same time the watching brief was begun on the construction works, including topsoil stripping. The watching brief led to an extensive excavation at Lower Farm (in Transect 12), Nuneham Courtenay, following on directly from the work at Fullamoor Farm and lasting for five weeks. During this time, an extensive area of features was noted at Hadden Hill (in Transect 2), Didcot. This was one of the first stretches of pipe-laying; this, coupled with the coincidence with the need to press on with work at Lower Farm, meant that a full-scale excavation could not be mounted at Hadden Hill. Nevertheless a small team undertook a four-day salvage excavation there at the end of July 1991.

<sup>6</sup> *Ibid.*, 63 and Map 35.



## THE STRUCTURE OF THE REPORT, AND THE SITE ARCHIVE

This report begins with a gazetteer of the sites on both pipelines where recording did not go beyond the level of the watching brief. The salvage excavation at Hadden Hill is then described, followed by the evaluation and excavation at Fullamoor Farm. The bulk of the report, however, consists of the description of the site and the pottery from Lower Farm. Each major section of the text (i.e. the gazetteer and site reports) is self-contained, with a brief introduction. The significance of the results is dealt with site-by-site. The descriptive texts have been edited from more detailed versions which are available in the archive. The latter consists of two elements: a site archive, containing the primary site documentation, and a research archive containing the original descriptive and specialist texts which have been edited to form this report. Both parts of the archive are arranged in the same order as this report, except that the site records for Hadden Hill are integrated with the watching brief records.

GAZETTEER OF SITES AND FINDS, BY P. BRADLEY, G.D. KEEVILL,  
A. PARKINSON, AND C. UNDERWOOD-KEEVILL

## INTRODUCTION

Sites are defined very broadly for the purposes of this gazetteer. Each find spot has been treated as a site. This largely reflects the problems of identification noted above. Other sites consist of one or more features observed and recorded, whether or not excavated, within the easement. All finds were recovered from topsoil unless otherwise stated in the gazetteer.

## THE DIDCOT-OXFORD PIPELINE (FIG. 2A-C)

*Site 1*

Fourteen pieces of flint were recovered during the collection of artefacts from stripped topsoil in Transect 2 at Hadden Hill, Didcot. The flints were collected in 10 m stints running N. along the easement from a point 0 m at the S. end of the Transect. The flintwork is unstratified and appears to be unrelated to the excavated remains at Hadden Hill, and is therefore included here rather than in the site report. Most of the assemblage is undiagnostic.

400-410	Three pieces, burnt unworked flint
410-420	One retouched flake
420-430	One burnt unworked flint
430-440	One burnt unworked flint
480-490	One burnt unworked flint
490-500	Two pieces, burnt unworked flint
570-580	One burnt unworked flint
580-590	One burnt unworked flint
600-610	One unretouched flake
730-740	Blade-like flake

The Hadden Hill flint scatter lies 1 km N.E. of an early and middle Bronze Age occupation site immediately S. of the A4130 Wallingford Road.<sup>7</sup> Unfortunately no direct link between the sites can be made, as none of the excavated features at Hadden Hill produced prehistoric material. While the activity there must be seen as unequivocally Romano-British, the flintwork does at least hint at a prehistoric presence in the area as well.

<sup>7</sup> I. Ruben and S. Ford, 'Archaeological Excavations at Wallingford Road, Didcot, S. Oxon., 1991', *Oxoniensia*, lvii (1992), 1-28.

*Site 2*

Two sherds of Roman grog-tempered ware and ten pieces of flint were recovered from a field immediately N. of the B4106, in Transect 5. The flints comprised four unretouched flakes, three blade-like flakes, two irregular waste fragments, and a core. None of the pieces was diagnostically datable. No features noted.

*Site 3*

Five sherds of Roman pottery were found at the south end of Transect 6. Two very worn oxidised ware sherds were found at SU 54039283. Three sherds, including one from a carinated jar and one grey ware piece, were found at SU 54009288. No features noted.

*Site 4*

Eight potsherds, two tile fragments, and two pieces of fired clay were recovered from the central area of Transect 6. Three of the potsherds were Roman, including a rolled rim from a jar. The remaining five sherds were medieval. At least one of the tile fragments was Roman. No features noted.

*Site 5*

A blade-like flint flake and two unretouched flakes were recovered from Transect 6. No features noted.

*Site 6*

Two sherds of Roman pottery were found at the N. end of Transect 6 (SU 53829326). One was a fragment of coarse parchment ware, while the other had a ferruginous temper. See site 7.

*Site 7*

Three ditches were found at the N. end of Transect 6. The features ran roughly E.N.E.–W.S.W. across the easement immediately N. of Site 6. Hand excavation was not possible, so the features were cleaned and recorded in the machine-cut trench section.

The earliest feature, ditch 5, was at least 1.6 m wide and 0.66 m deep, with shallow sides sloping into a broad, slightly rounded bottom. Its N. side was cut away by ditch 4, 1.2 m wide and 1.04 m deep. This had a V profile, the N. side of which was cut by ditch 3, 0.93 m wide and 0.45 m deep. This had a less pronounced V profile.

Unfortunately no finds could be recovered from the ditches or the machine spoil heaps adjacent to them. The potsherds from Site 6 may have been associated with the features. It seems likely that the ditches relate to the cropmark complex immediately to the W., centred on SU 536936, and perhaps also a 'trackway' to the E. consisting of two parallel linear features centred on SU 541932.<sup>8</sup>

*Site 8*

A broken copper alloy buckle loop was found at the N. end of Transect 6, in the area of ditches 5–7. No association between the buckle and the features could be determined. The object is in good condition, but less than half is

<sup>8</sup> Benson and Miles, *op. cit.* note 4, 63–6 and Map 35.

present. It is sub-rectangular, with simple incised linear decoration and perforations in the long sides. Post-medieval. Surviving dimensions 48 mm × 47 mm, cross-section 8 mm × 2 mm maximum.

#### *Site 9*

One fragment of Roman greyware, a possible amphora sherd, and one tile fragment were found in Transect 7, N. of the Moor Ditch. No features were present, but the presence of the cropmark complex centred on SU 536936 should again be noted.<sup>9</sup>

#### *Site 10*

A single unretouched flint flake was recovered from Transect 9 at *c.* SU 532954. No features noted.

#### *Site 11*

A single unretouched flint flake was recovered at the N. end of Transect 9, at SU 53079580. No features noted.

#### *Site 12*

A gravel metalled track (4) running approximately N.-S. was found at the extreme N. end of Transect 9, at SU 53069584. The track was 3 m wide, and the metalling was 0.06 m thick. It was cut into a patchy layer of silty loam which appeared to be an old ploughsoil. A ditch (3) on the S. side of the track also cut the ploughsoil, but the relationship between the track and ditch could not be determined. They were probably contemporary. A sherd of tile, probably post-medieval in date, and an unretouched flint flake were recovered from the ditch. Both features were cut by a concrete duct and a modern service trench, and ran underneath the road which skirts the W. side of Culham Laboratory.

The track and ditch appear to be post-medieval in date, and may have been disused before the Laboratory site was developed. The position and orientation of the features correspond closely to a minor road or farm track running past Clifton Farm, through Gorse Covers, and towards the old Nuneham Courtenay - Culham road on the first edition Ordnance Survey map.<sup>10</sup>

#### *Site 13*

A sherd of post-medieval glazed red earthenware was found at SU 52939626. A 13th/14th-century jug sherd in Oxford fabric AM<sup>11</sup> was recovered to the N. of this, at SU 52959630. Both finds were in Transect 10. No features noted.

#### *Site 14*

A base sherd from a Roman grey ware jar was recovered in Transect 10 at SU 53159657. No features noted.

#### *Site 15*

A blade-like flint flake was recovered from Transect 11 at SU 53989755. No features noted.

<sup>9</sup> Ibid.

<sup>10</sup> OS 1st edition 1" map 1830, sheet 13; appears also to be shown as a field boundary on Davis' map of the County of Oxford, 1793-4.

<sup>11</sup> R. Haldon with a contribution by M. Mellor, 'Late Saxon and Medieval Pottery', 111-39, in B. Durham, 'Archaeological Investigations in St. Aldate's, Oxford', *Oxoniensia*, xlii (1977), 83-203. All Oxford fabric codes given in the gazetteer refer to the above report.

*Site 16*

A truncated flint flake, probably of Mesolithic date, and a Roman grey ware sherd were recovered in Transect 11 within 10 m of each other; the former was at SU 538978, and the latter at SU 539978. No features noted.

*Site 17*

A flint core rejuvenation flake was found at the N. end of Transect 12, at SP 53780068. A further sixteen pieces of flint and one polished greenstone axe fragment were recovered from features, topsoil and other layers at Lower Farm, Nuneham Courtenay, during the excavation of the Romano-British kiln site immediately S. of Site 17. These were all stratified and/or small found, and are therefore catalogued in the site report.

*Site 18*

Several finds were collected in a short stretch of the pipeline easement in Transect 13. Three sherds of Roman pottery and an unretouched flint flake were found at SP 53840081; the pottery consisted of one oxidised body sherd and two grey ware base sherds. One rim fragment from a 13th/14th century jug in Oxford fabric AM was found close by, at SP 53770083. A Roman oxidised bowl or mortaria base was found at SP 53760093. No features noted.

*Site 19*

A cooking pot base sherd, probably in Oxford fabric AG, was recovered in Transect 13 at SP 53730171. No features noted.

*Site 20*

A substantial quantity of pottery and tile, and three flints were found centred on SP 529027, close to the N. end of the pipeline in Transect 15. The pipe trench was dug and backfilled in a single operation, so that detailed observations could not be made. The topsoil had previously been stripped to natural, however, and no features were noted. Ridge-and-furrow could be seen, running at right-angles to the easement (i.e. N.E.-S.W.). Most of the finds were derived from the ridge-and-furrow ploughsoil.

The three flints consisted of two unretouched flakes (one of which had been burnt), and a blade-like flake. The ten tile fragments were a mixture of Roman and medieval material. The pottery consisted of: 27 Roman sherds, including white-slipped mortaria, grey ware jar rims, and parchment ware; four sherds of late Saxon shell-tempered ware; and 30 medieval sherds, including Oxford fabrics AM and AQ.

It is difficult to determine the significance of this assemblage. The quantity of pottery recovered is substantially larger than most assemblages recovered from the pipeline except that from Nuneham Courtenay. No features could be identified, but this may relate to circumstances of discovery. The fact that the pottery appeared to derive from a ploughsoil does not necessarily diminish its potential importance, especially with regard to the late Saxon sherds.

## THE WOOTTON-ABINGDON PIPELINE (Fig. 3)

*Site 1*

Nine potsherds and a fragment of glazed medieval floor tile were found in Transect 5 at SU 49339890. The pottery consisted of: one worn sherd of Roman greyware; seven medieval sherds in Oxford fabrics AG, AQ and BF, with an 11th-13th century date range; and one sherd of 18th/19th century salt-glazed grey ware. No features noted.

*Site 2*

A cremation pit 0.56 m in diameter was found on the W. edge of the easement in Transect 4 at SU 49139941. The cremation was unurned. It was left *in situ* because it was not threatened by the pipeline operation. An unretouched flint flake was found 3 m to the N.N.E. of the cremation.

*Site 3*

A sherd of Roman greyware and a fragment of fired clay were recovered from Transect 4 at SU 49129950. No features noted.

*Site 4*

Six Roman greyware sherds and a medieval sherd in Oxford fabric AG were found in Transect 3 at SU 49009983. No features noted.

*Site 5*

A large bank crossed the easement in Transect 3 at SU 48869998. No finds were recovered when this was cut during pipelining. The feature corresponds with the line of the Wootton-Sunningwell parish boundary.

*Site 6*

Three sherds (one grog-tempered, one oxidised, one grey ware) of Roman pottery were recovered from Transect 3 at SP 48750010. No features noted.

## DISCUSSION

Twenty nine sites were revealed by the pipelines, including the excavations at Hadden Hill, Fullamoor Farm, and Lower Farm which make up the bulk of this report. Many of the sites in the gazetteer probably do not represent substantial archaeological monuments comparable with the three excavations. The flintwork from Hadden Hill may reflect prehistoric activity in the vicinity, and as such this would certainly be of considerable archaeological importance in its local context.<sup>12</sup> No comparable material was recovered from stratified contexts, however, whereas Romano-British pottery was abundant.

The quantity of material from Transect 6 (Sites 4-8) suggests that a more substantial site may be present here. Indeed ditches were found at the N. end of the Transect, possibly associated with Roman pottery (Sites 7 and 6 respectively). The likely association with known cropmark sites has already been noted. Unfortunately a more positive identification of archaeological remains was not possible within the confines of the watching brief.

Two substantial sites were located during the watching brief, both on the Didcot to Oxford main. The Hadden Hill and Lower Farm excavations are described below. The project therefore identified three major areas of archaeology (including Fullamoor Farm), while other possible sites were also noted. This appears to be a relatively low density of sites, although a similar result was obtained on the Cleeve to Didcot pipeline,<sup>13</sup> part of the same system as the Didcot to Oxford main. The watching brief

<sup>12</sup> See Ruben and Ford, *op. cit.* note 7.

<sup>13</sup> Ford, *op. cit.* note 3.

was often carried out under less than perfect circumstances, and this may have affected the number of identified sites. It must be stressed, however, that the pipeline route was planned with archaeological considerations in mind. Similarly the route was chosen to avoid the cropmarks around Clifton Hampden, Culham and Long Wittenham.

### THE SALVAGE EXCAVATION AT HADDEN HILL, DIDCOT, BY A. BOYLE, G. D. KEEVILL, AND A. PARKINSON

#### INTRODUCTION

A watching brief and salvage excavation was undertaken at Hadden Hill on the southernmost stretch of the pipeline (Transect 2) in July 1991. The area examined lies N. of the A 4130 Wallingford Road, 2 km N.E. of the town of Didcot (see Fig. 2a). The underlying geology is upper greensand. The pipeline easement was aligned along the E. edge of an existing trackway with arable to the E. and the Hadden golf course to the W. Features were noted over a N.-S. length of approximately 190 m of the pipeline. There was a very slight gradient from 72.4 m above OD at the N. end to 72.25 m at the S. end of the area examined.

A 15-m wide strip of topsoil was removed by machine along the length of the route and spoil placed on the W. side of the easement. The definition of features was often difficult as extensive patches of topsoil, disturbed during stripping, were redeposited and compacted on to the easement. Most features, therefore, were recorded in the pipeline section before the pipes were laid. Features were located by measuring northward from a point 0 m at the S. end of Transect 2. Locations are presented in the form 0 + 550 m, while Figure 4 shows the relation of the site grid points to the Ordnance Survey National Grid. The pipe trench was approximately 1.30 m wide. Recognisable discrete features were cleaned and recorded.

Parts of the pipe laying were completed before the opportunity for detailed examination arose. These include the area between 0 + 550 m and 0 + 600 m and the area S. of the main concentration of archaeological features. It is likely, therefore, that the density of features shown on Figure 4 understates the quantity of archaeology within the salvage area. Pottery and flint was recovered from the spoil heap in 10-m strips throughout the area where archaeological features were noted, and for some distance to either end. The flints are listed in the gazetteer. The quantity of finds recovered from the topsoil suggests that more archaeological features were present but that these could not be defined and recorded in detail. No less than 319 sherds (1710 g) of Roman pottery were recovered from the spoil heap. Fired clay, tile and building materials were also present.

#### THE SITE

Features consisted of a series of ditches and gullies, two pits and a post hole. Ditches 16 and 19 were aligned N.N.W.-S.S.E. and N.E.-S.W. respectively, and gully 17 was aligned approximately N.-S.; the remaining linear features were aligned E.-W. The analysis of the stratified pottery indicates that two phases of Roman activity were present: Phase I, dating from the mid 1st to the mid 2nd century AD, and Phase II, covering the period after *c.* AD 240. All of the features cluster in the stretch from 0 + 450 m to 0 + 650 m. The N. limit of the archaeology appears to be defined by a shallow depression approximately 80 m long, and apparently lying perpendicular to the easement.

#### *Phase I: early Roman*

Ditch 2 was approximately 1.00 m wide and 0.32 m deep. Ditch 15 was aligned approximately E.-W. but appeared to turn at a 90° angle on the W. side of the pipe trench and continue northwards. It was approximately 1.5 m wide and 0.58 m deep with a rounded bottom and sides which sloped at an angle of 60° from the horizontal on the S. side and 45° on the N. side. Ditch 16 was aligned approximately N.N.W.-S.S.E., and was therefore cut obliquely by

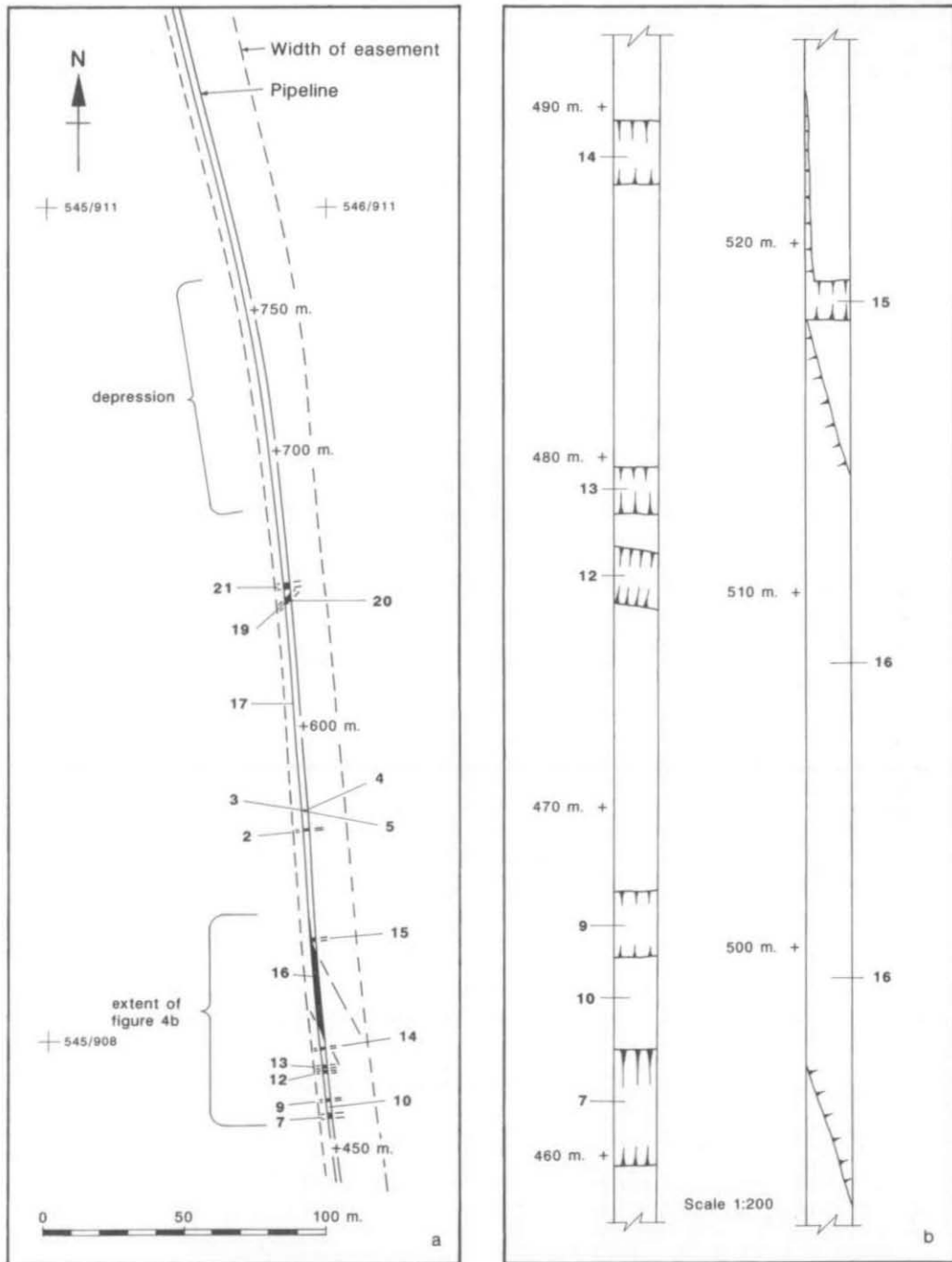


Fig. 4. Hadden Hill, Didcot: location and plan of Roman features.

the pipe trench. The ditch could not be recorded accurately in plan or section, but it appeared to be at least 5 m wide. As such it was the widest feature identified on the site, but it was only 0.44 m deep. Gully 17 was 0.26 m wide and 0.14 m deep. It had a rounded bottom and sides sloped 35° from horizontal.

Pit 3 was not excavated, but approximate plan dimensions were 1.8 m × 1.5 m. The shape of the feature suggested that it may actually have been two intercutting pits. Early Roman pottery was recovered from the feature during surface cleaning. Flat-bottomed pit 4 was approximately 0.83 m wide and 0.2 m deep. The sides sloped at 45° from the horizontal on the S. side and 85° on the N. side. It was adjacent to pit 3.

### *Phase 2: mid-late Roman*

Ditch 7 was 3.22 m wide and 0.8 m deep. It had a slightly rounded bottom and the sides sloped at 50° from horizontal on the S. side and 25° on the N. side. Ditch 14, 1.78 m wide and 0.66 m deep, had a rounded bottom and sides sloping at 60° from horizontal on the N. side and 45° on the S. side. A fragment of decorated flagon (Fig. 5) was recovered from the fill of this feature. Ditch 21 was 2.16 m wide and 0.41 m deep. The sides sloped at 50° from horizontal on the S. side and 45° on the N. side. A possible occupation layer, 10, lay between ditches 7 and 9. Its character was not clear, but a small group of pottery was recovered.

### *Undated features*

Ditches 9, 12, 13, 19 and 20 and a possible posthole (5) did not contain finds. The fills, however, were similar in character to the features which produced Roman pottery. The lack of pre- or post-Roman finds (excepting the small quantity of unstratified and undiagnostic flint, listed in the gazetteer) makes it likely that all of the features are of Roman date.

## THE ROMAN POTTERY, by P. BOOTH

### *Introduction*

A total of 412 Roman sherds weighing almost 3 kg were recovered from the site. There were 231 EVEs (estimated vessel equivalents). In addition there were 13 medieval and 29 post-medieval sherds, mostly unstratified, which were not examined further. The pottery was recorded in the same way and using the same codes as the material from Lower Farm.

The majority of the Roman material had been collected from the spoil heap after topsoil stripping (77.4% of sherds but only 57.6% of the total weight). The high proportion of unstratified material imposed a number of problems. The average size of the sherds was small, although the average weight of the stratified sherds, 13.5 g, was very close to the comparable figure from Lower Farm (c. 13.0 g); many sherds were quite abraded. Identification of fabrics was correspondingly more difficult than with better preserved material. The majority of identifications were therefore at the level of ware subgroup rather than of individual fabrics. The data are, however, closely comparable with those from Lower Farm, though it should be recognised that there is a higher proportion of tentative identifications with the Hadden Hill pottery.

The principal characteristics of the assemblage are the presence of an early Roman component, including 1st century material amongst which 'Belgic type' fabrics occur, and a distinct later Roman phase. There was only one vessel of outstanding interest, an Oxfordshire colour-coated face flagon (see below). Ware/fabric and vessel type codes and other terminology is detailed in the report on Lower Farm below.

### *Fabrics (see Table 1)*

The assemblage was dominated by reduced coarse wares, which totalled 47.6% of all sherds (59% by weight). The proportion from stratified contexts was slightly higher. Other ware groups were, however, quite well represented. The fine and specialist wares together totalled 23.9% of sherds (22.8% weight), a high figure for what was presumably a domestic site. The majority of this figure was made up of Oxfordshire colour-coated ware (fabric F51) and of sherds probably of this fabric which retained no traces of colour-coat (fabric OF). All the other component fabrics of the fine and specialist ware group were probable Oxfordshire products (and indeed most are likely to have come from Lower Farm), with the exception of five very small sherds of samian ware. In contrast with the production site, however, white ware, white slipped and mortarium fabrics were all poorly represented.



TABLE 1: HADDEN HILL, DIDCOT: QUANTITIES OF ROMAN POTTERY BY FABRIC

	<i>Stratified</i>			<i>Unstratified</i>		
	NOSH	WT	EVES	NOSH	WT	EVES
S	3	2		2	14	
F51	4	168	0.28	43	228	0.32
OF	1	3		23	84	0.02
M32				1	29	
M31	1	5	0.01	5	59	0.04
M41	2	7		2	13	
W12	5	17		2	14	
W20				1	3	
W22				2	19	
Q20				1	7	
Q21	1	4				
<i>Subtotal</i>	17	206		82	470	
E				2	7	
E20	2	13				
E30	4	56				
E60	1	1		5	60	
E80	5	53		26	109	0.22
<i>Subtotal</i>	12	123		33	176	
O10	8	31	0.25	44	119	0.15
O20	5	12		8	44	
O27	1	6	0.03			
O80				2	8	
O81				1	7	
<i>Subtotal</i>	14	49		55	178	
R10	16	220	0.19	39	236	0.36
R20	16	294	0.15	27	128	0.09
R30	7	100		60	287	0.12
R50	1	4	0.03	1	2	
R90	9	258		20	222	0.02
<i>Subtotal</i>	49	876		147	875	
B11	1	3		2	11	0.03
<i>Total</i>	93	1257	0.94	319	1710	1.37

There was only one white mortarium sherd, a fragmentary (unstratified) rim probably of Young type M2 or M3, with part of a very worn wide stamp with herringbone motifs on each side. The condition of the stamp was too poor to merit illustration, but it appears very similar to Young no. 16,<sup>14</sup> ascribed to Littlemore. Other mortarium fabrics were M31 (white slipped) and M41 (red colour-coated). White and white slipped wares were scarce, with no diagnostic forms.

The coarse wares were principally in reduced fabrics, but with 'Belgic type' (E) and oxidised (O) wares also represented, in roughly equal quantities. The E wares were principally of the grog tempered E80 group (31 out of 45 sherds), but sand and flint tempered fabrics were also present in small quantities. A local source may be suspected for these wares, which were common at sites in the region such as Abingdon. They may date to both sides of the Roman conquest; this is uncertain, however, and in the discussion below a post-conquest date has been assumed. Vessel types consisted of jars and a flagon.

Oxidised coarse wares comprised 16.8% of the total sherds from the site but less than half that figure in terms of weight. Sherds in these fabrics were unusually small, both in stratified and unstratified contexts. The great majority of sherds in this group were of the fine fabric O10. There were a few sherds of sandy oxidised wares (O20 and O27) and three of coarse tempered fabrics including one of pink grogged ware (O81). Some of the small sherds ascribed to fabric group O10 may have been colour coated but were so abraded that even their attribution to fabric OF (likely Oxfordshire colour-coated ware) could not be justified. Nevertheless it is likely that some of these fragments had once been colour-coated. As a consequence of the small sherd size, vessel types were difficult to identify, but they included a jar, a dish and two beakers in O10, and another jar in O27.

<sup>14</sup> Y, 59.

All the major reduced ware groups were represented in the assemblage. Fine (R10) and slightly sandy and coarse sandy (R30 and R20) fabrics occurred in roughly equal amounts. R90 fabrics, less common in terms of sherd numbers, were most important in terms of weight as would be expected from coarse tempered fabrics used principally for large storage jar forms. Even these sherds, however, amounted to less than 0.5 kg in weight. Amongst the stratified material the importance of R10 and R20 compared to R30 was marked, but the overall quantities are so small that the significance of this is difficult to judge. The reduced wares were used principally for jars, but jar/bowl forms, bowls and dishes also occurred.

Three sherds of probable black-burnished ware (BB1, fabric B11) were found. All were small and eroded. Only one was from a recognisable (dish) form.

### *Vessel types* (see Table 2)

Some 40 rim sherds were counted, amounting to 2.31 EVEs. Such a small assemblage presents difficulties of interpretation. Nevertheless some elements of the expected pattern occurred in that jars were the most common vessel type (38.5% EVEs, 40% rims), followed by bowls (16.9% EVEs, 17.5% rims). Flagons and beakers were relatively well represented, owing to the occurrence of unusually large rim sherds of a couple of vessels in each category.

TABLE 2: HADDEN HILL, DIDCOT: CORRELATION OF VESSEL TYPES WITH WARE  
(QUANTIFICATION BY EVEs)

Ware	Type B	C	D	E	H	I	J	K	Z	TOTAL
F51	0.28		0.05		0.27					0.60
OF				0.02						0.02
M31								0.05		0.05
E80	0.06	0.16								0.55
O10		0.10		0.23		0.02			0.05	0.40
O27		0.30								0.03
R10		0.36			0.11	0.08				0.55
R20		0.15	0.08		0.1					0.24
R30		0.04	0.08							0.2
R50		0.03								0.03
R90		0.02								0.02
B11							0.03			0.03
Total	0.34	0.89	0.21	0.25	0.39	0.10	0.03	0.05	0.05	2.31
% EVEs	14.7%	38.5%	9.1%	10.8%	16.9%	4.3%	1.3%	2.2%	2.2%	
No. Vessels	2	16	4	3	7	2	11	3	2	40
Based on Rims										

The detailed breakdown of vessel types by fabric can be seen in Table 2. Jars occurred in all the main coarse ware groups, and uncertain jar/bowl types in R20, R30 and F51. The last of these may have been an example of the miniature jar (Young type C101), which was unusually common at Lower Farm. Bowls occurred in both fine and coarse ware fabrics. The fine ware (F51) examples included Young types C45, C47, C51, C52 and possibly C81, not all represented by rims. There were only three probable beaker rims, two of 2nd-century types in fabric O10. Most of the rims in coarse fabrics were not assignable to specific types within Young's corpus. Mortaria, however, were identifiable, though they were scarce. Examples of M2 or M3, C97 and WC7 were noted, but only the last of these occurred as rims, with three possible examples.

The most notable vessels from the site were both flagons. A fragment of a stepped rim in a fine version of the grog tempered fabric R80 was most probably from a wide mouthed flagon or jar. The general form can be seen at sites such as King Harry Lane, Verulamium.<sup>15</sup> Within the region a further comparable vessel, thought to be of local manufacture, comes from Fawler,<sup>16</sup> although again the rim form is not exactly like that of the Hadden Hill piece. Both vessels are likely to date to the mid 1st century or a little later.<sup>17</sup>

<sup>15</sup> I.M. Stead and V. Rigby, *Verulamium: The King Harry Lane Site*, English Heritage Archaeol Rep 12 (1989), 147, Fig. 58. Approximate comparanda for the rim itself are vessels 2A3 and 3B2 on the same figure, though these are both examples of flasks rather than wider mouthed forms.

<sup>16</sup> S. Green, 'Roman Pottery,' in T.G. Allen, 'Excavations at Bury Close, Fawler', *Oxonienia*, liii (1988), 293-315.

<sup>17</sup> *Ibid.*

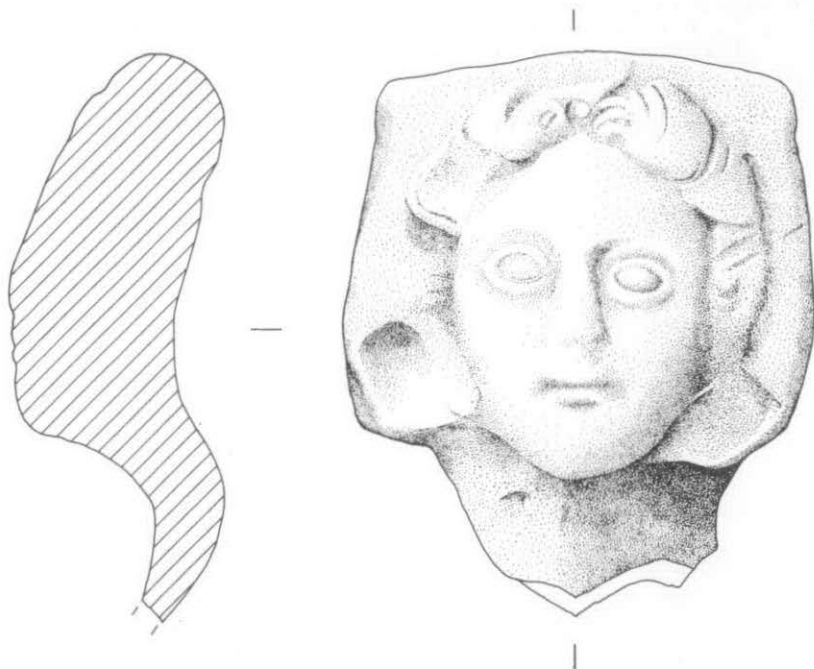


Fig. 5. Hadden Hill, Didcot: face mask from an Oxfordshire flagon; scale 1:1.

The most striking piece from the site was the rim of a face necked flagon (Fig. 5) of Young type C11, dated to after *c.* AD 350. This came from ditch 14. Attribution to the standard Oxfordshire fine ware fabric F51 was at first uncertain, since the colour-coat was almost entirely absent, but is beyond doubt. The character of some of the detail of the moulding is not, however, typical of most of the examples figured by Young<sup>18</sup> or Munby,<sup>19</sup> all of which have a more elaborate hairstyle than the Hadden Hill example. Oxfordshire white ware faces<sup>20</sup> and the face-mould from Horsepath<sup>21</sup> also usually have more detail of the coiffure. It is possible that the Hadden Hill mask was not as well-impressed as it might have been, and there is slight wear on the upper part of the sherd. Nevertheless there is no clear evidence that the application of the face to the neck of the vessel resulted in further obscuring of the design. It seems, therefore, that there is a slight but distinct stylistic difference between this example and others known from the region. It is possible that this might indicate production at a different centre from those already known (i.e. perhaps Lower Farm rather than Baldon) but on present evidence this is at best a tentative suggestion.

### Conclusion

The small assemblage from Hadden Hill derived from a probable settlement site in which two significant phases of activity, in the mid/late 1st–mid 2nd century and in the late 3rd–4th, could be discerned. Samian ware, BB1 and pink grogged ware were the only non-local products certainly identified, and these totalled only 2.2% of the sherds. This figure is very similar to that from Lower Farm, but the character of the locally produced material at Hadden Hill is very different from that at Lower Farm, with close to 'normal' representations of major ware groups and the principal vessel types. The occurrence of early Roman (or just possibly late Iron Age–early Roman) pottery indicates a period of activity not recognised at Lower Farm.

<sup>18</sup> Y, 149.

<sup>19</sup> J. Munby, 'Some Moulded Face Flagons from the Oxford Kilns', *Britannia*, 6 (1975), 182–8.

<sup>20</sup> S. Green, 'An Oxfordshire Face-neck Flagon from Beedon, Berks', *Oxoniensia*, 1 (1986), 279–80; J. Turner, 'Romano-British Moulded Heads from Shotover', *Oxoniensia*, liv (1989), 399–400.

<sup>21</sup> M. Hassall, 'A Pottery Mould from Horsepath, Oxon.', *Oxoniensia*, xvii–xviii (1954), 231–4.

## DISCUSSION, by P. BOOTH AND G.D. KEEVILL.

The distribution of finds throughout the spoil heap strongly suggests that some archaeological features went unrecorded because of the speed of the contractor's operations. Nevertheless the small average sherd size of the unstratified material, and the extent of abrasion, suggests that much of the material had already been incorporated into the topsoil before machining began. It is possible, therefore, that the initial construction work did not have a large impact on the archaeology. The corollary, admittedly, must be that previous cultivation has caused extensive damage to the upper parts of the archaeological features. Many of the ditches, however, were more than 0.5 m deep. The overall level of preservation should therefore be good. The pipe trenching will only have destroyed a very small part of the archaeology.

The Roman pottery comprises a range of major ware groups and the principal vessel types characteristic of a domestic site. The narrow slice through the archaeology makes it extremely difficult to interpret the internal dynamics of the site. One can suggest that the ditches belong to a series of enclosures whose principal alignment is E.-W., although the early Roman ditch, 16, and undated ditch, 19, do not share this axis. It should be noted that the early Roman ditches 15 and 16 must intercut; unfortunately this relationship could not be determined during the excavation. Nevertheless it is possible that 16 and 19 belong to a different structural phase, distinguishable by their atypical alignments.

The relatively limited evidence indicates that earlier (Phase I) features are clustered in the centre of the site, with later (Phase II) ditches to the N. and S. The stratified Roman pottery separated out into two clearly defined chronological groups. The first of these, comprising features 2, 3, 4, 15, 16 and 17, are all dated (on the limited evidence recovered) between the mid 1st and mid 2nd century AD and most if not all probably fall within AD 70-150. Seventy-two sherds came from these contexts. Apart from small fragments of samian ware (3), W12 (5) and ?Q21 (1) these assemblages consisted entirely of oxidised, reduced and 'Belgic type' (E) coarse wares, with one possible fragment of BB1.

The later contexts (7, 10, 14, 21) produced fewer sherds but were consistent in containing fabrics such as F51, M31 and M41 as well as reduced wares. No other ware groups were represented in this small collection. Phase II can only be broadly dated after *c.* AD 240, though it is likely that most features were of 4th-century date.

Remarkably little Roman material has come from the Hadden Hill area. The Oxfordshire SMR contained only two references to pottery at SU 546917<sup>22</sup> and SU 54178993<sup>23</sup> in 1991. The former find lies *c.* 800 m to the N., while the latter is the same distance to the S.S.W. A substantial excavation 1.2 km to the S.W. produced a minimal quantity of Roman pottery among a large assemblage of Bronze Age material.<sup>24</sup> In short, the local and regional significance of Hadden Hill cannot be determined at this stage, although it can be suggested that the site was a substantial settlement, probably contained within ditched enclosures.

## THE ASSESSMENT AND EXCAVATION AT FULLAMOR FARM, CLIFTON HAMPDEN, BY A. BOYLE, G. D. KEEVILL AND M. PARSONS

### INTRODUCTION

Fullamor Farm lies on the N. bank of the Thames on gently rising ground (see Fig. 2b). The underlying geology comprises gravel, but the S. extremity of the site contains alluvial floodplain deposits (Fig. 9). The parish boundary between Clifton Hampden and Culham formed the W. limit of the field in which the archaeological work occurred. A hedgerow marked the S. side. The easement therefore formed an L shape along the S. and E. edges of Fullamor Plantation field.

<sup>22</sup> Oxfordshire SMR (Westgate Library), PRN 7942.

<sup>23</sup> PRN 9634.

<sup>24</sup> J. Timby, 'Pottery', in Ruben and Ford, *op. cit.* note 7, 16.



Fig. 6. Fullamoor Farm, Clifton Hampden: aerial photograph from the N.W., taken in July 1990 (reproduced by permission of the Royal Commission on the Historical Monuments of England; ref. SU 5394/62, NMR 4650/35); Fullamoor Plantation lies in the centre of the photograph, and the Thames crosses the top right corner.

The pipeline route was designed to avoid the concentration of cropmark features centred on SU 532 945. These are plotted and described by Benson and Miles<sup>25</sup> and are based on the work of Allen and St. Joseph.<sup>26</sup> At that time there were 13 annular features, two of which were incomplete, while another was a double concentric circle at SU 531 941. One of the circles was partly enclosed by linear ditches. In addition there was a major linear feature running across the field in a S.W.-N.E. direction. The more recent aerial photographs have added more detail to these features, as well as demonstrating the presence of previously unknown features. A series of linear cropmarks and pits are scattered

<sup>25</sup> Benson and Miles, *op. cit.* note 4.

<sup>26</sup> Oxfordshire SMR, PRN 8500-8512.



Fig. 7. Fullamoor Farm, Clifton Hampden: aerial photograph from the N.E., taken in June 1989 (reproduced by permission of the Royal Commission on the Historical Monuments of England; ref. SU 5394/53, NMR 4453/84).

throughout the area to the S. of the major cropmark linear boundary, while a cluster of at least four linear features and a pit group are located to the N.W. of the boundary at SU 5295 9460 (Figs 6–8).<sup>27</sup> The recent work also revealed an impressive but previously unknown complex of linear features and enclosures E. of Fullamoor Farm in an area which, fortunately, would not be affected by the pipeline.

The increased sensitivity of the site led to work at Fullamoor Farm being carried out in two phases. Initially an evaluation was carried out on the pipeline route. This comprised the excavation of five 30-m long trial trenches (A–E, Fig. 8). The trenches were intended to investigate a probable medieval headland and part of a major linear cropmark feature, while also establishing the presence or absence of archaeological features and deposits adjacent to the known monuments.

<sup>27</sup> The cropmark plot on Figure 8 is based on the RCHME original. Compare this with the plot in Benson and Miles, *op. cit.* note 4, Map 35.

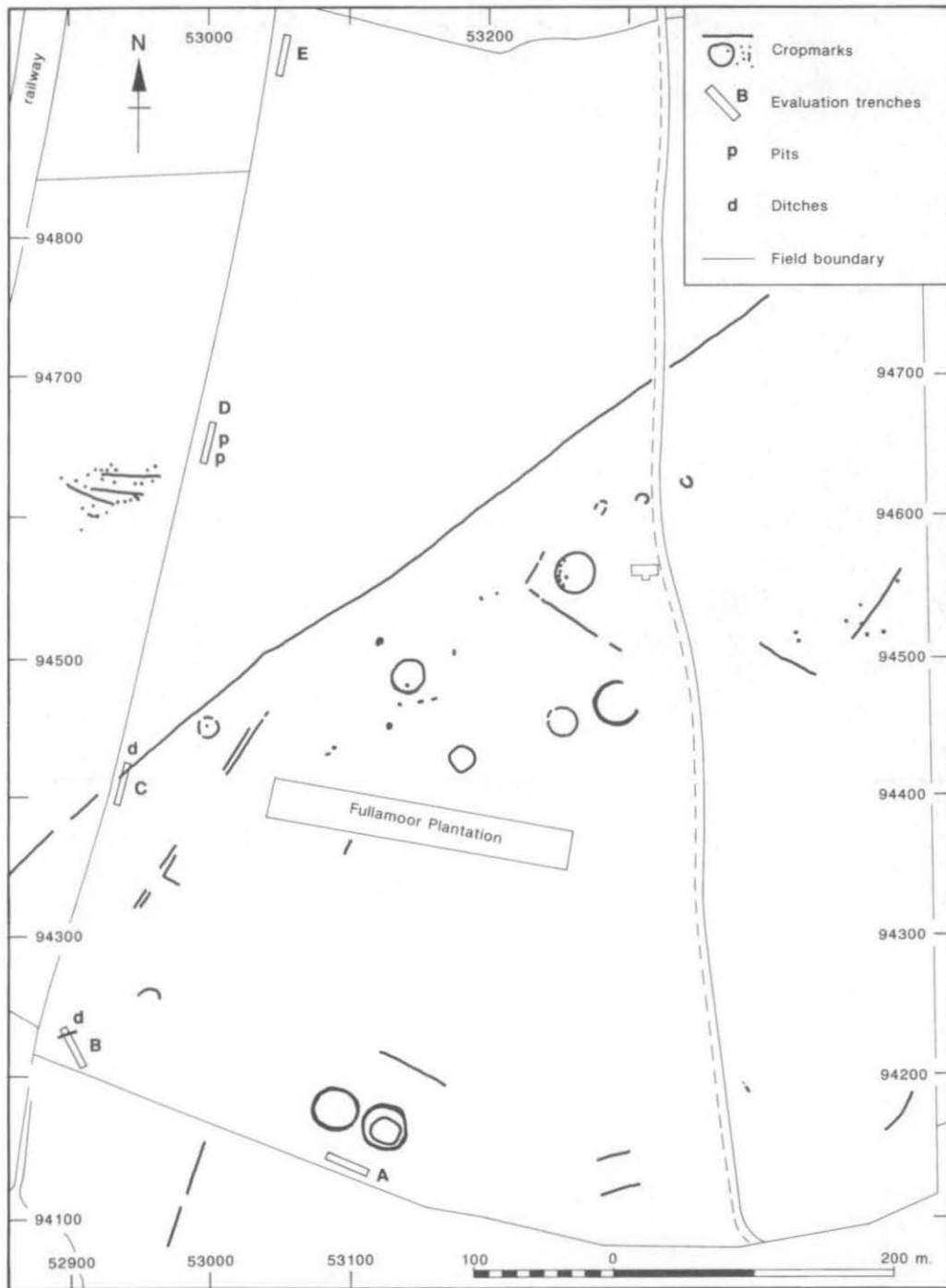


Fig. 8. Fullamoor Farm, Clifton Hampden: cropmarks, and evaluation trenches.

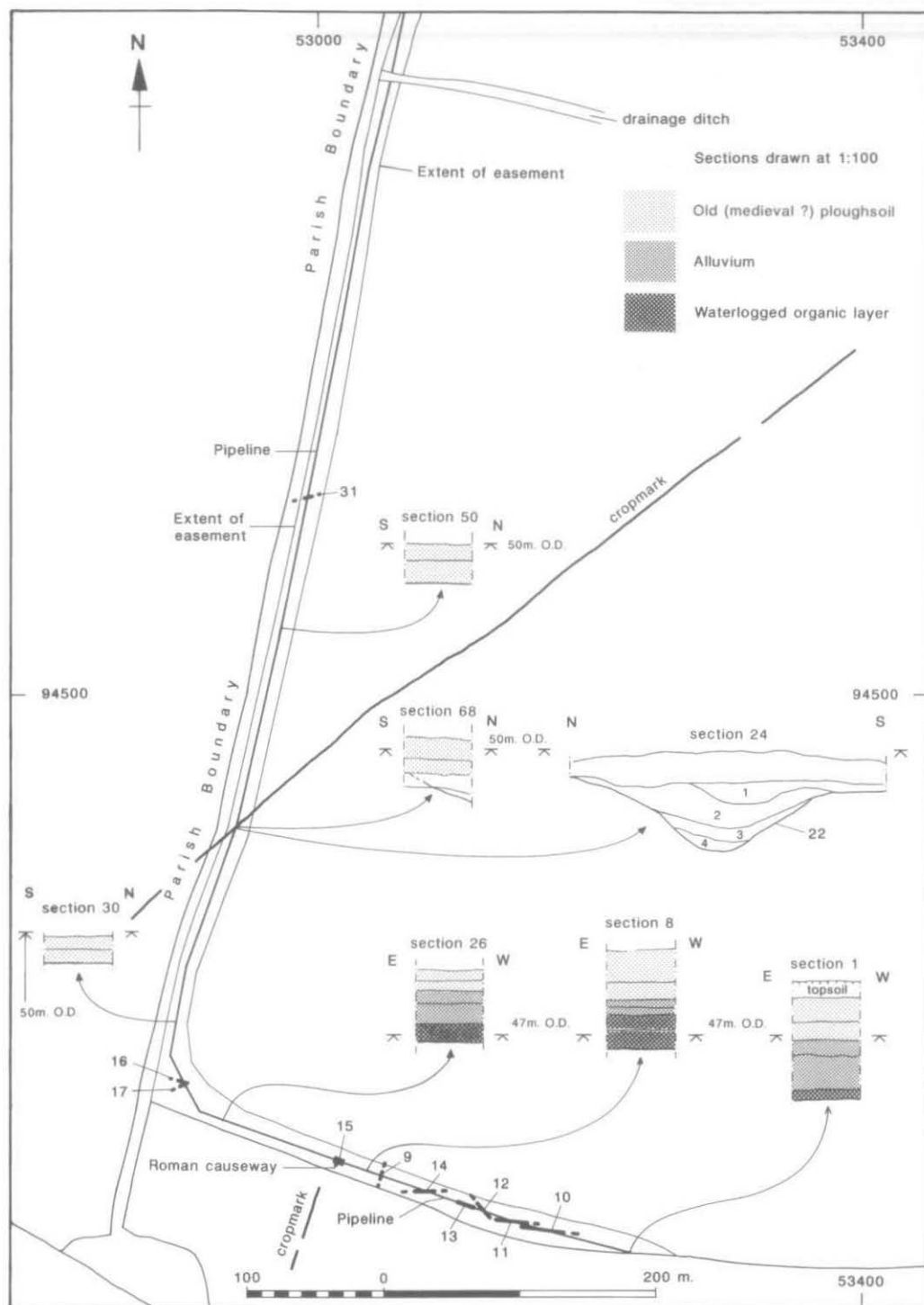


Fig. 9. Fullamoor Farm, Clifton Hampden: excavation results.



The trenches demonstrated that enough archaeology was present to justify an excavation in advance of the pipeline construction. Immediately after the topsoil had been stripped from the easement, therefore, the pipe trench route was marked out by the engineers. The substantial depth of alluvium and later ploughsoils protected much of the underlying archaeology, and the natural gravel surface was only exposed on the easement in very small discrete areas. Excavation was therefore largely confined to the pipe trench footprint. A mechanical excavator supplied by the building contractor was used to remove overburden within the pipe trench for virtually the entire length shown on Figure 9.

All deposits and features in the evaluation trenches were recorded using a letter code corresponding to the trench, followed by the context number. Thus D/4 refers to feature 4 in Trench D. Context numbers were assigned in a continuous sequence during the excavation.

## RESULTS (Figs. 8 and 9)

The topsoil, average depth 0.22 m, sealed two layers with a combined depth of 0.4 m–0.7 m. These appeared to be medieval ploughsoils. They overlay two alluvial layers (maximum combined depth 0.7 m) which were confined to the lower-lying ground at the S. end of the field. A layer of waterlogged organic material underlay the alluvium.

### *Prehistoric contexts*

The earliest contexts were a series of linear features, pits and old ground surfaces dating to the Mesolithic/earlier neolithic, late Bronze Age and early-middle Iron Age. A dark grey silty occupation layer (B/4, 0.15 m–0.20 m deep) was recorded in Trench B and was also noted during the excavation (layer 19). Two fragments of flint cores and two unretouched flint flakes were recovered from B/4. It was overlain by layer B/3 (approximately 0.12 m deep), which was cut by ditch B/9 (= ditch 16 or 17 in the excavation). An equivalent ground surface was also seen in trenches C and D. The occupation layer in trench D was cut by circular pit D/4 which was 0.50 m in diameter and 0.45 m deep. A second pit, D/5, was located in the middle of the trench and measured approximately 0.70 m × 0.50 m × 0.23 m. It contained three unretouched flint flakes.

Features 9–14 in the S. arm of the pipe trench were broadly contemporary with the ground surfaces. N.–S. ditch 9 appeared to be part of a substantial linear feature running perpendicular to the pipeline trench. It was 0.94 m wide and 0.15 m deep. Gully 10, aligned approximately E.–W., was 0.50 m wide and contained a flint scraper. Gully 11 ran parallel to 10, and was 0.60 m wide. Gully 14 was 0.50 m and 0.17 m deep and was also roughly parallel to 10. Dimensions for features 12 and 13 could not be determined with certainty.

Ditches 16 and 17 lay on the corner of the pipe trench. Ditch 16 was aligned approximately W.N.W.–E.S.E.; it had a flattish bottom and sides sloping at 35° from horizontal. It was 3.10 m wide and 0.54 m deep. It cut N.E.–S.W. ditch 17 (1.4 m wide and 0.4 m deep), which in turn cut layer 19. Ditch 17 sloped at 30° from horizontal on the S.E. side. A pit (18) measuring 0.8 m × 0.5 m × 0.2 m was found in the bottom of ditch 17. It appeared to be cut by the ditch, although this could not be proved. Ditch 31, aligned approximately E.N.E.–W.S.W., had a flat bottom and sides sloping at 45° on the N. side and 70° on the E. side.

The major N.E.–S.W. linear cropmark visible on aerial photographs was examined both in Trench C (C/4) and during the excavation (22). The ditch was 3.4 m wide, and up to 1.02 m deep, with sides sloping at up to 50°. The S. side of the ditch was poorly defined, and the uppermost fill (22/1) had been disturbed by ploughing. Iron Age pottery was recovered from the upper fill of the ditch during the evaluation, and a single sherd came from the primary fill (22/4) during the excavation.

### *The Roman track (Fig. 10)*

Romano-British activity was represented by a single feature. A limestone track or causeway (15) was located in the southern arm of the trench to the W. of the late Bronze Age ditches. The track was aligned N.–S., and was 4.20 m wide and up to 0.32 m thick. The make-up (15/2) consisted of a light- to mid-grey clayey silt with 20–50% small and medium white gravel and occasional pebbles. The latter appeared slightly more dense on the W. half of the trackway, presumably because it survived to a slightly greater depth there. Layer 15/1 incorporated both regular and irregular lumps of white limestone. The largest stones were 0.2 m long. There was no indication that any of the

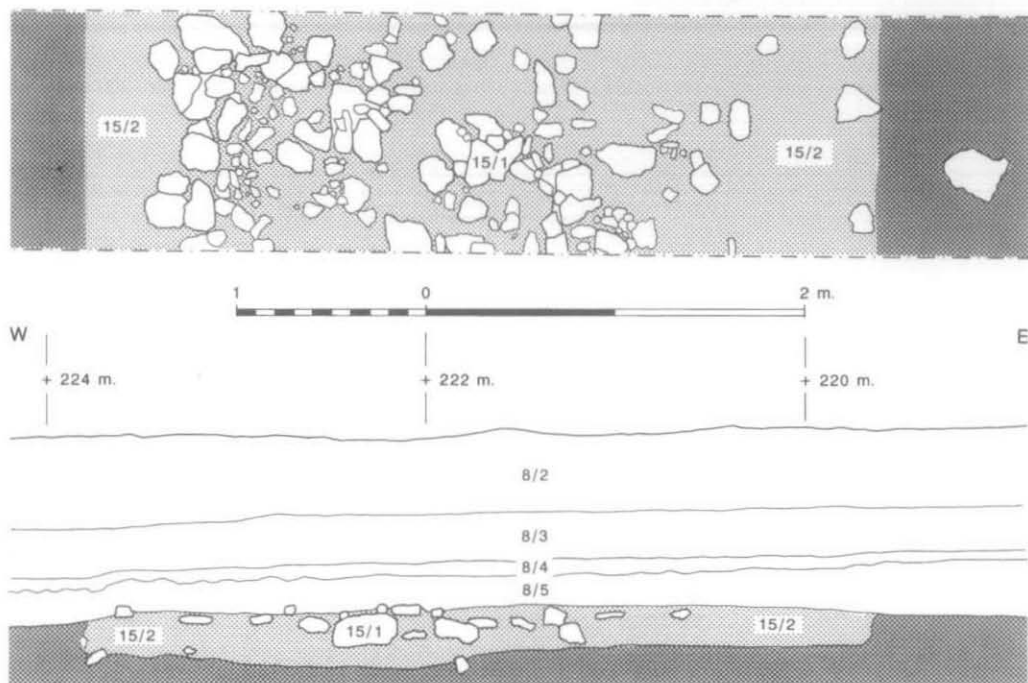


Fig. 10. Fullamoor Farm, Clifton Hampden: plan and section of the causeway.

stones were pitched; all seemed to have been laid flat on the surface of 15/2. A complete rim from an Oxfordshire ware narrow-necked jar was recovered from the make-up layer (15/2). It provides a *terminus post quem* of the late 2nd or early 3rd century AD. The track was cut into the waterlogged layer, and was in turn sealed by the alluvial deposits.

#### *Undated features*

These comprised a pit, six postholes, and a pair of tree-throw holes in the N. arm of the easement. The features were sealed by the medieval ploughsoil, but no positive dating evidence was found. Further details are available in the archive.

#### THE POTTERY, by P. BOOTH and C. UNDERWOOD-KEEVILL

A total of 24 sherds was recovered from the evaluation and subsequent excavation. The pottery covered all periods from the Bronze Age to post-medieval. There were two distinct Bronze Age sherds, one with grog, organic and sand temper, the other containing large angular quartzite inclusions. The latter fabric has been considered characteristic of the later Bronze Age at Didcot<sup>28</sup> and comparable (unpublished) sherds probably of late Bronze Age date also occur at Sinodun Camp, Little Wittenham. The Fullamoor Farm sherds were stratified in ground surface C/3, and provide a *terminus post quem* for the substantial ditch (C/4 = 22) which cut this layer.

The 7 Iron Age sherds were from this feature. A small shell tempered fragment came from context 22/4, and the remainder constituted a single group from the upper fill of the ditch where it was examined in evaluation trench C. This group included sherds in shell, sand and shell, sand, and quartzite and sand tempered fabrics, the last of which was burnished on both surfaces. One of the sand and shell tempered sherds had tooled curvilinear decoration, perhaps

<sup>28</sup> J. Timby, 'Pottery', in Ruben and Ford, *op. cit.* note 7, 9–16.

from a swag motif. This characteristic, and the finer sand and sand/shell tempered fabrics, are likely to have been of middle Iron Age date, though the coarser shell-tempered sherds are assignable to the early Iron Age.

The 6 Roman sherds were in fine reduced wares (fabric R10 – for codes see Lower Farm below), a coarse oxidised fabric (O80) and Oxfordshire colour-coated wares (forms Young C51 and a mortarium). Only the two reduced sherds were in a Roman deposit, from below the Roman metal surface. They included a complete rim of Young type R12, which provides a *terminus post quem* of the late 2nd-early 3rd century for the surface.

The medieval ploughsoils included two late Roman colour-coated sherds, and one sherd of early Saxon date in a fabric (sandy fabric 1) recognised at Audlett Drive, Abingdon, and elsewhere in the region.<sup>29</sup> These layers also produced a rim of a 12th century long necked cooking pot, probably in the Oxford medieval pottery fabric AG.<sup>30</sup> A pipkin/skillet handle fragment in the same fabric was amongst the topsoil material, along with two Roman, two other medieval and four post-medieval sherds.

#### THE WORKED FLINT, by P. BRADLEY

Ninety-four pieces of worked flint and seven pieces of burnt unworked flint and stone were recovered from Fullamoor Farm. Sixty four came from topsoil, and a further seventeen from the assessment trenches. The remaining pieces were retrieved from layers, a pit, ditches and a tree-throw hole. The assemblage was dominated by unretouched waste, which was generally soft hammer struck (diffuse bulbs of percussion, minimal or narrow butts). 70.3% of the unretouched waste were blades, blade-like flakes or bladelets. The core fragment from the topsoil may have been from a blade core. The core rejuvenation flake indicates that some care was being exercised during knapping. This material may be either Mesolithic or earlier Neolithic, although the lack of diagnostic retouched pieces precludes firm dating. Four retouched pieces were recovered. One of the scrapers exhibited fine scale flaking and may be Beaker in date. The possible knife fragment exhibits invasive retouch and may also be of Beaker date.

A/4	broken scraper	1
B/4	unretouched flakes (1 burnt)	2
	core fragments	2
	burnt unworked flint	4
	burnt stone	3
D/3	blade-like flake (broken)	1
	core rejuvenation flake (tablet)	1
D/5/A/1	unretouched flakes (1 broken, 2 burnt)	3
Topsoil	unretouched flakes, including 1 core	28
	rejuvenation flake	2
	blades	15
	blade-like flakes	2
	bladelets	7
	irregular waste	1
	core fragment	4
	retouched (1 end and side scraper,	
	1 broken ? end scraper,	
	1 broken ?knife, 1 broken retouched	
	flake) burnt unworked flint	5
Medieval	unretouched flakes	7
ploughsoil	blades	2
	irregular waste	1
Alluvium	unretouched flake	1
	burnt unworked flint	1
Waterlogged	unretouched flake	1
layer	blades	2
	blade-like flake	1
10	blade-like flake	1
13	blade-like flake	1
18/A/1	burnt unworked flint	1
30/A/1	blade-like flake	1

<sup>29</sup> C. Underwood-Keevill, 'The pottery', in G.D. Keevill, 'An Anglo-Saxon Site at Audlett Drive, Abingdon, Oxfordshire', *Oxoniensia*, lvii (1992), 55–79.

<sup>30</sup> Haldon and Mellor, op. cit. note 11.

## DISCUSSION

The dating of the prehistoric ground surfaces and features is problematic, partly because of the limited nature of the excavation which did not allow for extensive exposure of features and deposits. The dating relies on a small assemblage of flint, much of which is not strongly diagnostic, and the very limited stratigraphy. The flints from ground surfaces (B4, D3) appear to be of Mesolithic or earlier Neolithic date, and much of the material in later contexts (e.g. the alluvium, ploughsoils and topsoil) is also of this date. The few flints from gullies and pits or postholes are more characteristic of the Bronze Age, however, and two sherds of later Bronze Age pottery were retrieved from the old ground surface in Trench C (context 3). It is suggested, therefore, that most of the prehistoric deposits and features are of Bronze Age date and that the earlier flints are residual.

The character of the deposits is equally difficult to define, again principally because of the limited exposure. Most features appear to be broadly domestic in character, and certainly they cannot be related directly to the ring-ditches known from aerial photographs. Nor is there any clear evidence for ritual deposition of deposits. The cluster of ditches (9–14) in the S. arm and at the corner (16–17, and pit 18) of the easement indicate a concentration of activity in the lower-lying ground on the edge of the Thames floodplain. Ultimately, the data are too limited to prove the nature of the site, but a domestic emphasis seems likely on the available evidence.

A major aim of the work was to excavate and, if possible, date the linear cropmark boundary. Both the primary and upper fills of the ditch contained Iron Age pottery, albeit in small quantities. The ditch also cut a ground surface which has been dated to the later Bronze Age. Ditch 31 was the only linear feature found in the N. arm of the pipeline route; as such it was also the only linear feature to the N. of the boundary ditch (see Fig. 9). It is possible, therefore, that the boundary ditch represented the deliberate enclosure of an existing settlement area.

The major linear ditch is of considerable regional importance, because it can be paralleled by an example from Lechlade, Butler's Field<sup>31</sup> and a less certain example from Northfield Farm, on the S. side of the Thames some 2.5 km E. of Fullamoor Farm.<sup>32</sup> All appear to demarcate substantial areas of land lying in a broad sweep of the Thames. The Lechlade and Northfield Farm examples are of the later Bronze Age, however, and the Fullamoor Farm ditch is perhaps more reminiscent (if on a much larger scale) of the Dyke Hills, Dorchester-on-Thames. It is notable that the Fullamoor Farm ditch encloses the lower-lying alluvial floodplain.

Distribution maps of Bronze Age and Iron Age sites in Oxfordshire show a marked clustering in the valleys of the Thames and its tributaries.<sup>33</sup> Relatively few find spots and/or sites are noted in the reaches of the Thames between Abingdon and Dorchester,<sup>34</sup> but a greater density is notable for the Iron Age.<sup>35</sup> Sites are distributed quite evenly on either bank of the river, although more settlements are noted on the S. bank. Fullamoor Farm, therefore, appears to be a very important site within the local, and perhaps regional, landscape in the later prehistoric period.

The N.–S. track or causeway (15) in the S. arm of the trench appears to be a Roman feature on the basis of the pottery stratified in 15/2, and because of its stratigraphic position under the alluvial layers. The major phases of alluviation in the Upper Thames valley occurred in the Roman and mid Saxon to medieval periods.<sup>36</sup> Presumably the feature continued southwards to the N. bank of the Thames (see Figs 8 and 9). The river is very wide at this point and is unlikely to have been bridged. The track is more likely to have served a small wharf or ferry. An interrupted linear cropmark 20 m to the S. of the causeway could be related to it, though the northern extension is unclear (Figs 8 and 9). A very short stretch of a linear cropmark immediately to the S. of Fullamoor Plantation may belong to the same

<sup>31</sup> D. Jennings, in A. Boyle, D. Clark, D. Jennings, D. Miles, and S. Palmer, *An Anglo-Saxon Cemetery at Lechlade, Butler's Field* (forthcoming).

<sup>32</sup> M. Gray, 'Northfield Farm, Long Wittenham', *Oxoniensia*, xlii (1977), 1–29.

<sup>33</sup> See Maps 5–8 in G. Briggs, J. Cook and T. Rowley, *The Archaeology of the Oxford Region* (1986).

<sup>34</sup> *Ibid.*, Maps 5 and 6.

<sup>35</sup> *Ibid.*, Maps 7 and 8.

<sup>36</sup> M. Robinson, 'Environment, Archaeology and Alluvium on the River Gravels of the South Midlands', in S. Needham and M.G. Macklin (eds.), *Alluvial Archaeology in Britain*, Oxbow Monograph 27 (1992), 197–208.

system, as may other features to the N., but the evidence is inconclusive at this stage. There would appear to be a marked absence of Roman material in this area;<sup>37</sup> no conclusions can be reached, therefore, as to the destination of the track to the N.

## THE EXCAVATION OF A ROMAN KILN SITE AT LOWER FARM, NUNEHAM COURTENAY, BY A. BOYLE, P. BOOTH AND G. D. KEEVILL

### INTRODUCTION

The Didcot to Oxford pipeline route ran through the W. third of Lower Field, immediately E. of Lower Farm. Excavation over five weeks in the summer of 1991 revealed extensive traces of a Romano-British pottery production site, incorporating a probable domestic area, a 'workshop' area and a pottery dump. Although no actual kiln structures were located along the length of the pipeline corridor, the quantity of fired clay, kiln debris and pottery wasters is strongly indicative of their presence in the immediate vicinity. A geophysical survey by the Ancient Monuments Laboratory, reported below, established the presence of kilns to either side of the easement, and showed that the site was set within a system of ditched enclosures.

### HISTORY

Lower Field is one of the four medieval open fields of the ancient parish of Nuneham Courtenay (see Fig. 11). Lower Field was broken up into smaller lots in the late 18th century at which time the current Lower Farm was established.<sup>38</sup> The other surviving medieval open fields are Wheat Land Field which lies immediately S. of Lower Field, Long Furlong Field located E. of Wheat Land Field, and Windmill Field which lies S. of Wheat Land Field below the village of Nuneham Courtenay. The village was removed to its current roadside site when the first Earl Harcourt decided to live at Nuneham Park from c. 1760; this necessitated the removal of the apparently squalid medieval village which lay to the N.E. of the old manor house.<sup>39</sup> The fields still correspond broadly to the pattern shown on Robert Smith's estate map of 1707.<sup>40</sup>

The N. side of Lower Field forms part of the parish boundary between Sandford-on-Thames to the N. and Nuneham Courtenay and Toot Baldon to the S. The boundary extends in a remarkably straight line from the river Thames eastwards towards the old Roman road between Dorchester and Alchester. The form of the boundary is in marked contrast to others in the vicinity which tend to weave around streams and other topographical features. The boundary of Sandford-on-Thames is described in an Anglo-Saxon land charter of AD 1054:<sup>41</sup>

. . . to the street<sup>42</sup> and south along the street to the Baldon boundary and then west along the boundary to the Nuneham boundary and so along the boundary to the south side of Hochylle Hill. . . (thence to the Thames)

<sup>37</sup> Briggs et al, op. cit. note 33, Maps 9 and 10.

<sup>38</sup> *The Victoria History of the County of Oxford*, v (1937), 244.

<sup>39</sup> *Ibid.*, map on 235, and 236.

<sup>40</sup> *Ibid.*, 235.

<sup>41</sup> M. Gelling, *Place-names of Oxfordshire*, ii (English Place-Names Society xxiv), 487.

<sup>42</sup> i.e. the Roman road from Alchester to Dorchester-on-Thames.

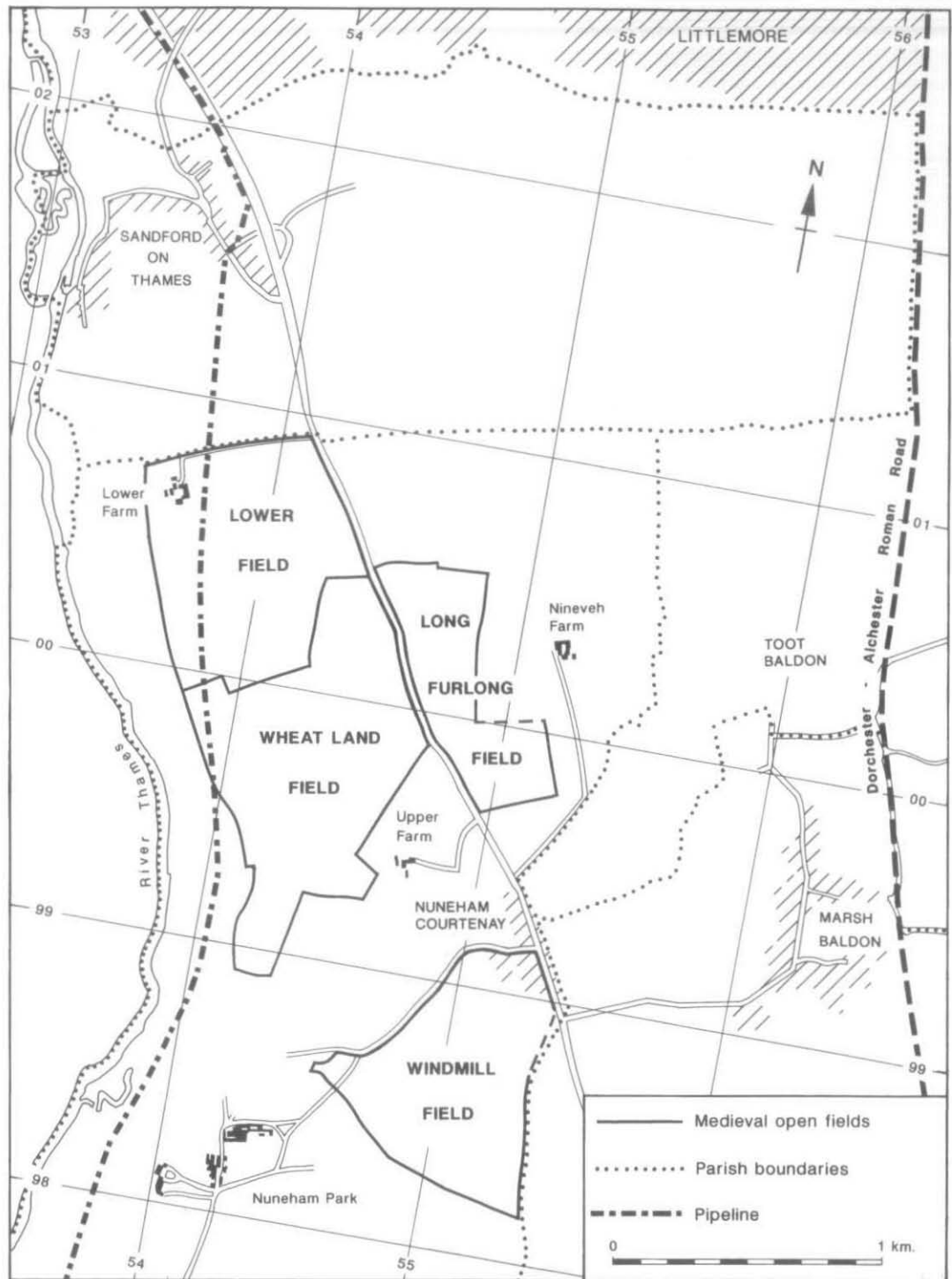


Fig. 11. Lower Farm, Nuneham Courtenay: location in relation to parish boundaries and medieval open fields.

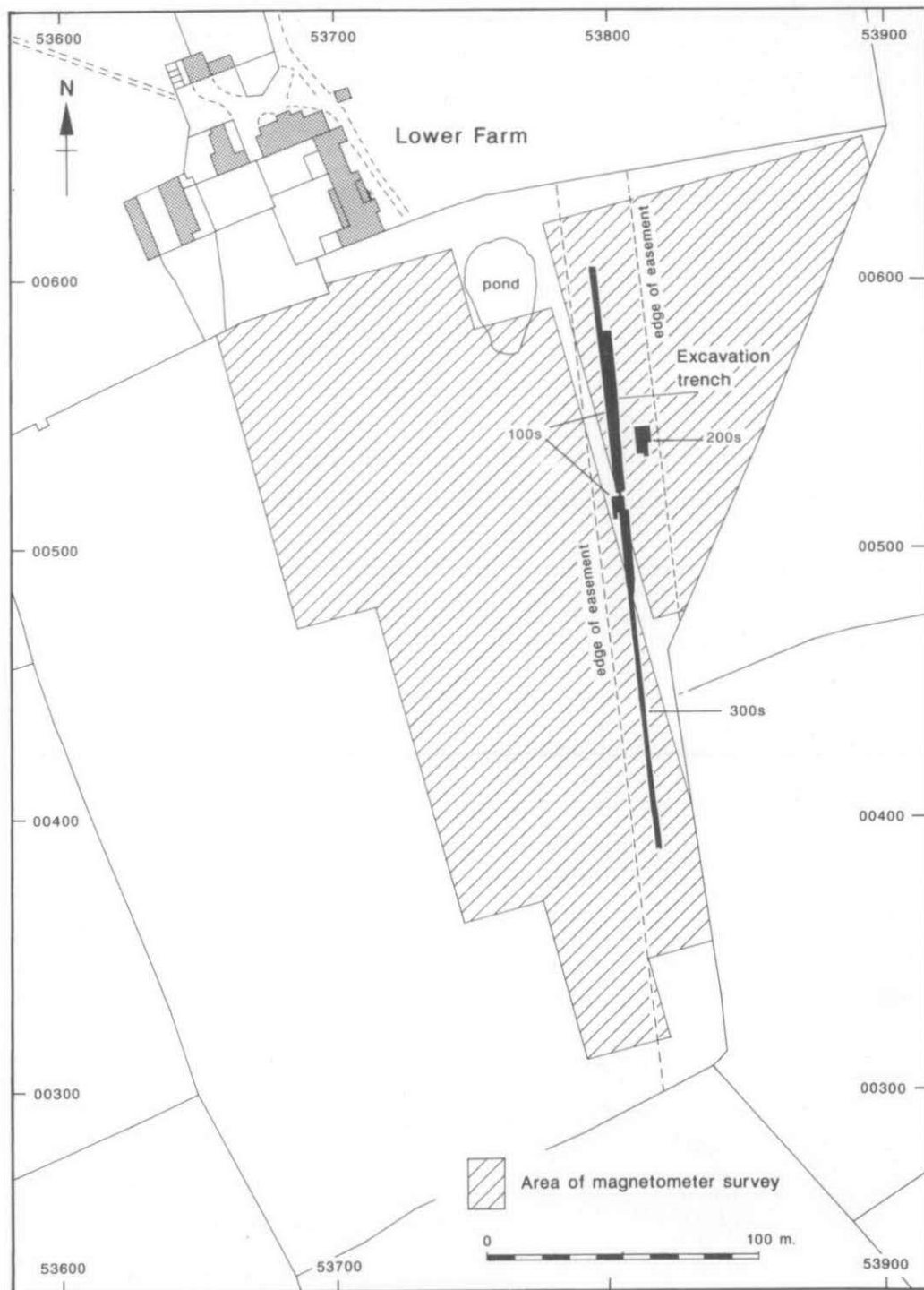


Fig. 12. Lower Farm, Nuneham Courtenay: location of the excavations and the magnetometer survey (see also Fig. 22).

Grundy<sup>43</sup> interprets the field name Hookell as a derivation of Hochylle; the field is in Nuneham parish, on the S. side of the Sandford boundary just E. of the Oxford–Henley road. The hill itself, however, can be identified on the N. side of the Nuneham–Sandford boundary, again on the E. side of the main road.<sup>44</sup>

Sandford is first mentioned in a charter of AD 811 which records the donation of land to Abingdon Abbey by Kenulf, King of the Mercians.<sup>45</sup> Further royal grants of land were made in AD 931 and AD 1050,<sup>46</sup> although it is difficult to determine the validity of such references.<sup>47</sup>

#### CURRENT LAND-USE AND SITE DISCOVERY

The pipeline crosses the E. edge of an area of pasture which contains the last remnants of medieval ridge-and-furrow to survive in Lower Field. The rest has been destroyed by deep ploughing. The fact that the ridge-and-furrow has been uncultivated in modern times means that the Roman archaeology below it has been preserved virtually intact. The medieval cultivation which created the ridge-and-furrow caused a certain amount of damage to the underlying stratigraphy, but the truncation thus caused was very limited.

A side-effect of the preservation, however, was the invisibility of the site within the archaeological record. Roman pottery had previously been discovered in the early 1960s '300 yards E. of Lower Farm' (at SP 539006),<sup>48</sup> but this find was made in the arable field immediately to the E. of the pasture. Such a limited discovery did not even hint at the potential of the site.

It was anticipated, therefore, that the archaeological input at Lower Farm would only need a watching brief. This commenced in July 1991, when the building contractors dug a narrow drainage trench along the E. edge of the easement. This work was monitored by Andy Parkinson, who recovered large quantities of Roman pottery. Later, during topsoil stripping along the easement,<sup>49</sup> areas of laid stone were noted in the bases of several furrows. The combination of the pottery and what appeared to be structural masonry led to an initial interpretation of the site as part of a settlement. It was agreed, therefore, that excavation should take place to record those parts of the site which would be destroyed. Fortunately the pace of construction allowed a five week window of opportunity when excavation could proceed unhindered by pipe laying.

#### METHODOLOGY (Figs. 13–16)

It was agreed that two rectangular areas, 1 (8 m × 4.5 m, Fig. 15) and 2 (9.5 m × 5.25 m, Fig. 14), would be excavated where high densities of stone were visible after topsoil stripping. Thereafter, and by agreement with the engineers and contractors, the pipeline route was

<sup>43</sup> G.B. Grundy, *Saxon Oxfordshire* (Oxfordshire Record Society xv), 53.

<sup>44</sup> A group of knolls at 60 m above Ordnance Datum can be seen in grid square SP 0154 on the Ordnance Survey Landranger Series Map 164 (1989).

<sup>45</sup> *V.C.H. Oxon.* v, 268.

<sup>46</sup> *Ibid.*

<sup>47</sup> One must always be wary of 'Saxon' charters in medieval cartularies, but the later Sandford documents appear to be genuine, at least as far as the boundaries are concerned. Domesday Book lists Sandford as one of the lands of St. Mary of Abingdon: *ibid.*

<sup>48</sup> *Oxoniensia*, xxviii (1963), 90.

<sup>49</sup> Fortunately, stripping followed the contours of the ridge-and-furrow, which lay perpendicular to the easement. This meant that the archaeology was protected from tracking machinery etc. by the remaining medieval ploughsoils.



laid out and excavated archaeologically. The remaining medieval ploughsoils were removed mechanically under archaeological control, while a machine also had to be used to sample some extensive deposits which could not be entirely removed by hand in the time available. The trench excavation was some 220 m long, while the exposed width varied from 1 m at the S. end where the pot dump was found,<sup>50</sup> to 4 m in the central and N. sections (Fig. 17). The greater width reflected the footprint of damage which would be caused by tracked machinery, but excavation into features was still largely confined to the location of the pipe trench itself, which would only be 1 m wide at most.

Contexts were assigned in three blocks of numbers. Area 1 (see Fig. 15) and the N. end of the trench excavation were given numbers from 100 to 197. Context numbers 200 to 222 were used in Area 2 (see Fig. 14). Contexts 300 to 330 were assigned to the pot dump and features/deposits within or below it in the S. section of the trench excavation.<sup>51</sup>

A magnetometer survey of the easement was undertaken while the excavations were in progress. It was hoped that kilns would be identified. Unfortunately, however, the 900 mm diameter pipes had been stored on the E. side of the easement before the survey could begin. These produced massive distortion which effectively masked any archaeological anomalies.<sup>52</sup> More detailed geophysical work in the pasture field by the Ancient Monuments Laboratory demonstrated that the site was in fact very receptive to magnetometer survey, although resistivity was less successful. This work is described below.

### THE EXCAVATION RESULTS

Stratigraphy was largely confined to relationships in the horizontal plane, although some vertical stratigraphy was present in Area 1 and the pot dump. Phasing of the excavated deposits therefore rests largely on the ceramic analysis. Evidence from coins is of limited value because of the small assemblage, and the high proportion of unstratified examples. The ceramic evidence suggests that two distinct phases of activity are present: I, early Roman (late 1st to early-mid 2nd century), and II, mid-late Roman (mid-late 2nd to 4th century). The earlier phase is represented by a small number of contexts in Areas 1 and 2, and in the N. section of the trench. These are distinguished in bold type on Figures 13-16. Some of the pot dump was also laid down in this phase. Later contexts occur throughout the excavations. A small quantity of Iron Age pottery was found, and one context (a localised soil layer, 304, underlying the pot dump) may date to that period. Identification of a distinct Iron Age phase of activity, however, does not seem justified on the available evidence.

The later Roman contexts occurred in three distinct zones of activity (see Figs. 13-16). The area N. of ditch 140 is interpreted as domestic and incorporated a number of ditches, pits and postholes. Three (of seven) neonate and newborn infant burials were found here.<sup>53</sup> No features were found in the 12 m immediately S. of the domestic area in the trench excavation. Gully 124 marks the N. limit within the trench of the second zone, defined as a pottery production workshop extending S. to and including the well, 317. Features in Area 2 appeared to belong to this zone as well, although some of them could have been domestic. The workshop has been defined as one in which a number of related pottery production activities took place; the use of the term is not intended to reflect the presence of an actual structure. The third zone, occupying virtually all of the S. section of the trench, comprised a pottery dump; observation of the pipe-laying suggested that the dump extended for a further 20-30 m beyond the limits of the pipe trench.

<sup>50</sup> The dump was manually excavated in a series of 1-m<sup>2</sup> boxes at 10-m intervals in an attempt to provide a control sample for finds retrieval.

<sup>51</sup> Feature orientations in the site description are given in relation to the trench/area excavation. Site north therefore reflects the alignment of the trench rather than OS Grid North. See Figure 12.

<sup>52</sup> A.D.H. Bartlett and B.Y. Turton, *Report on magnetometer Survey at Lower Farm, Nuneham Courtenay, Oxfordshire 1991* (1991), unpublished internal report. Available in the site archive.

<sup>53</sup> The remaining four were located in the 'workshop' area.

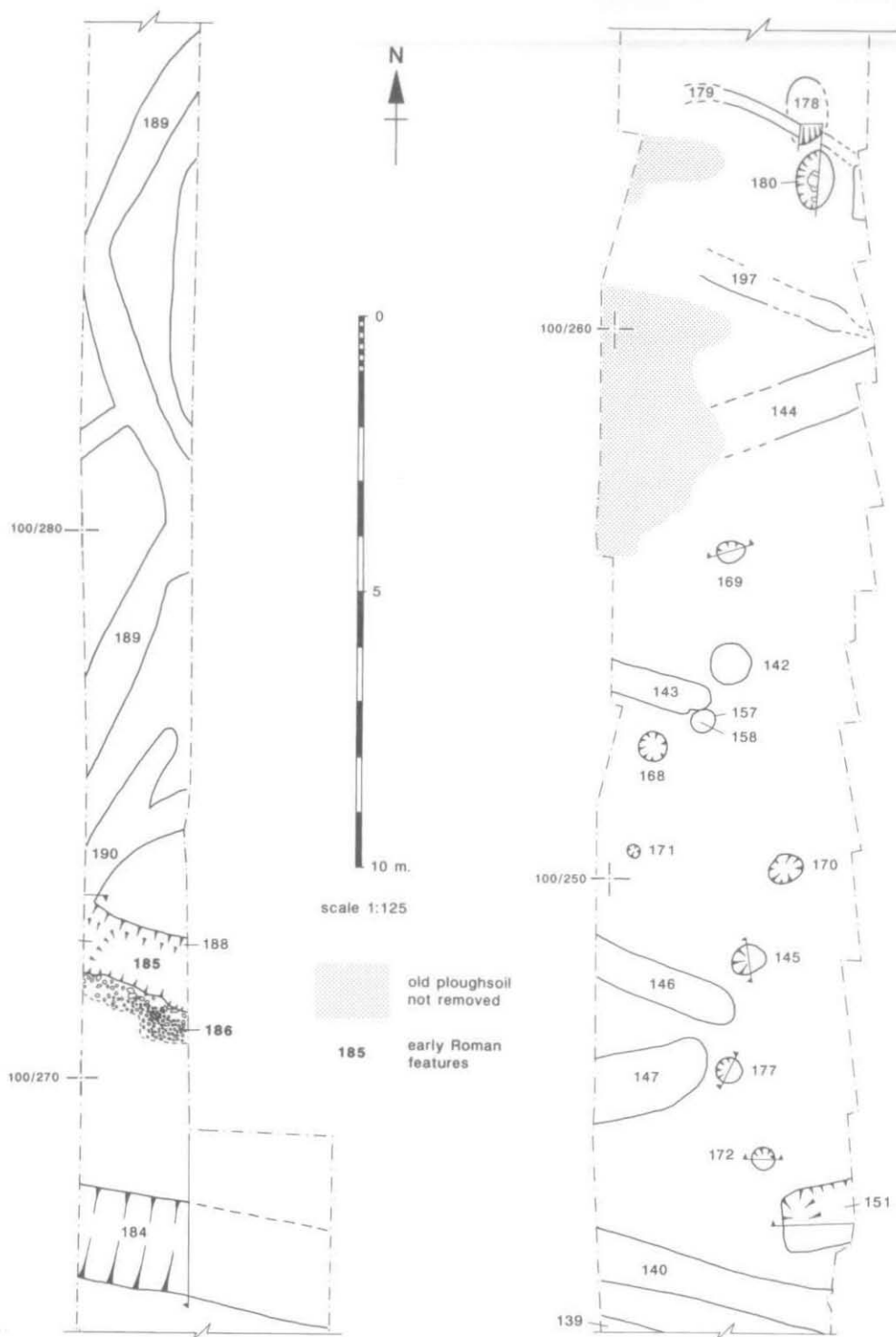


Fig. 13. Lower Farm, Nuneham Courtenay: north end of trench.

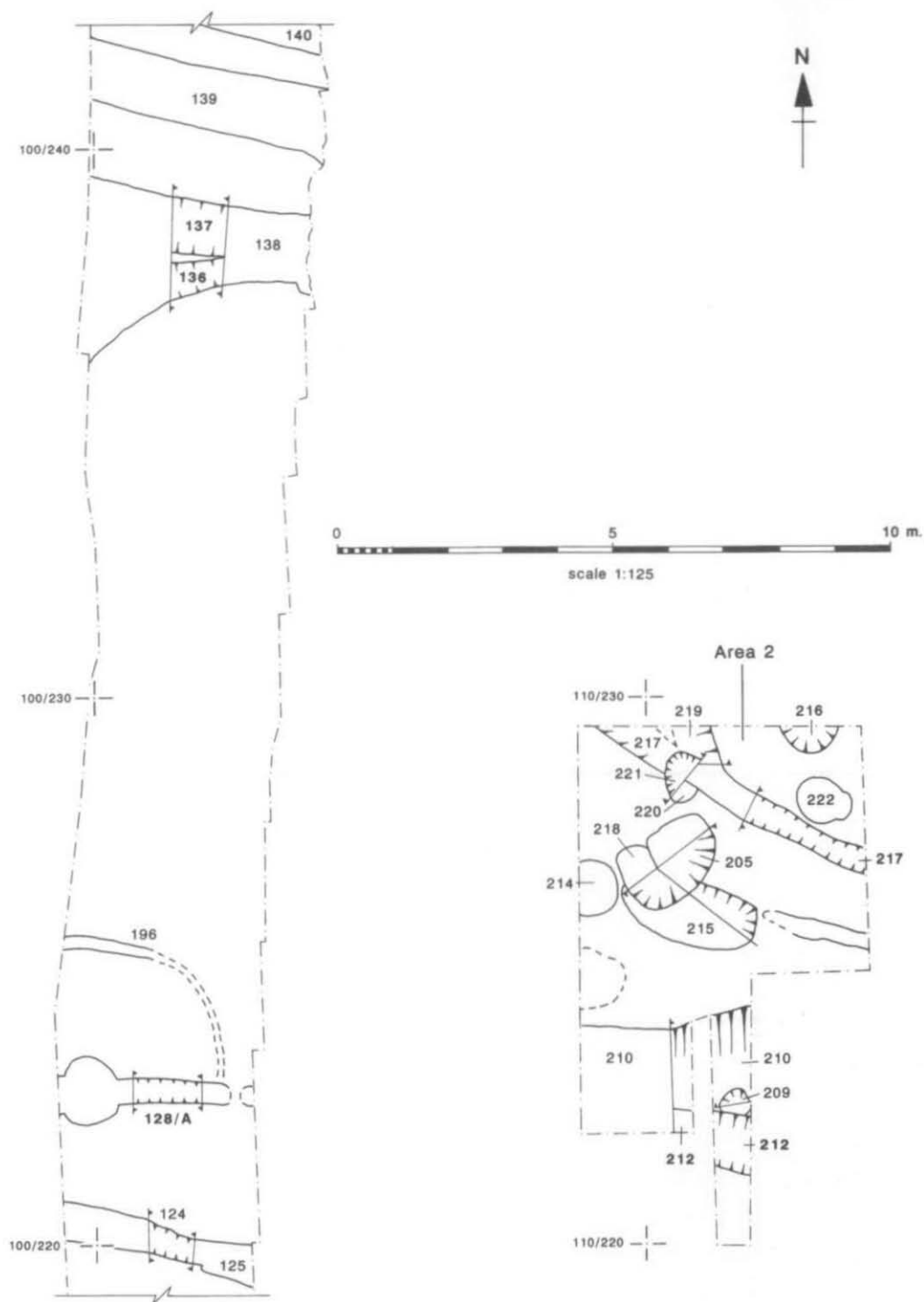


Fig. 14. Lower Farm, Nuneham Courtenay: north central area of trench.

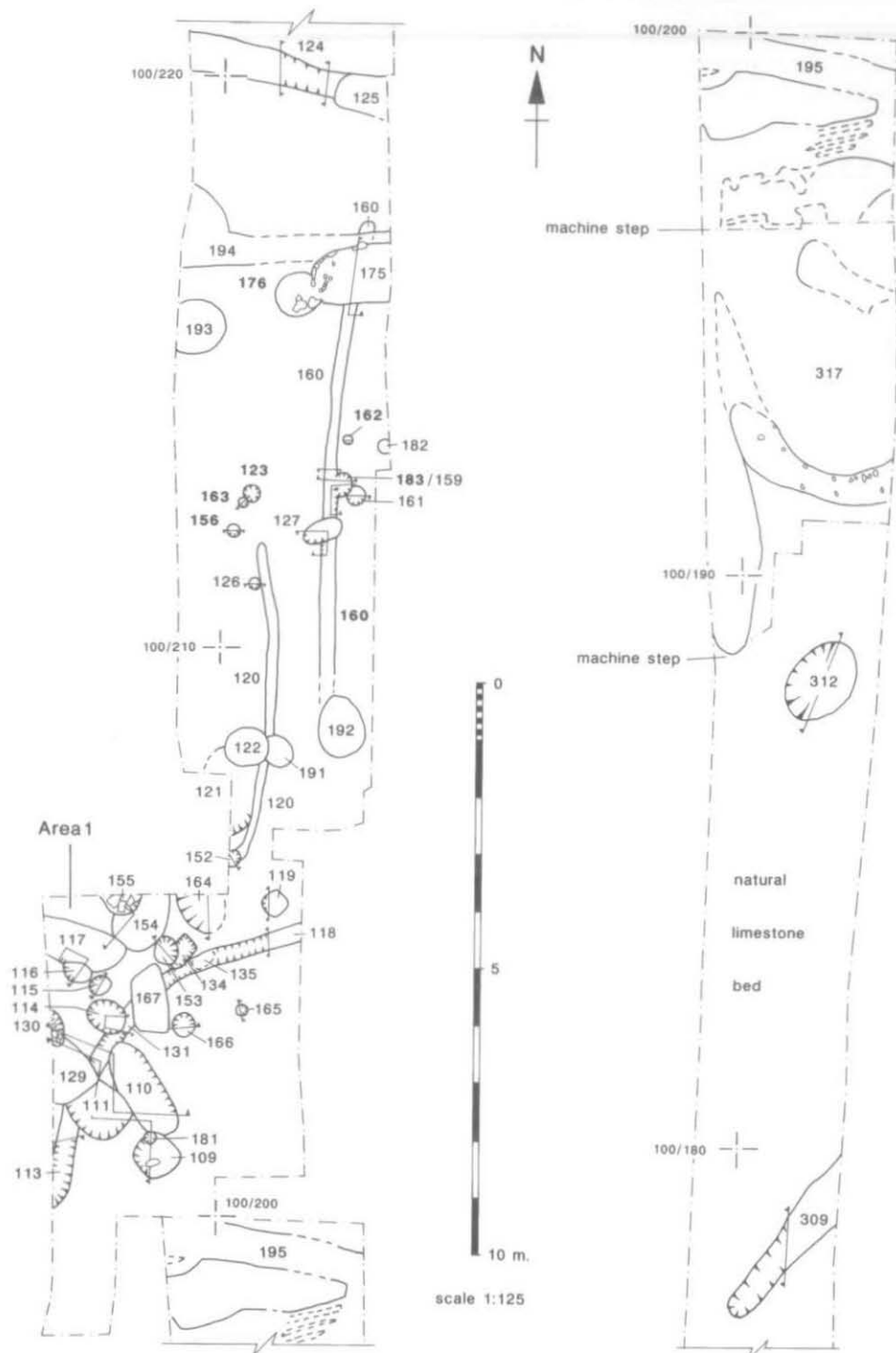


Fig. 15. Lower Farm, Nuneham Courtenay: south central area of trench.

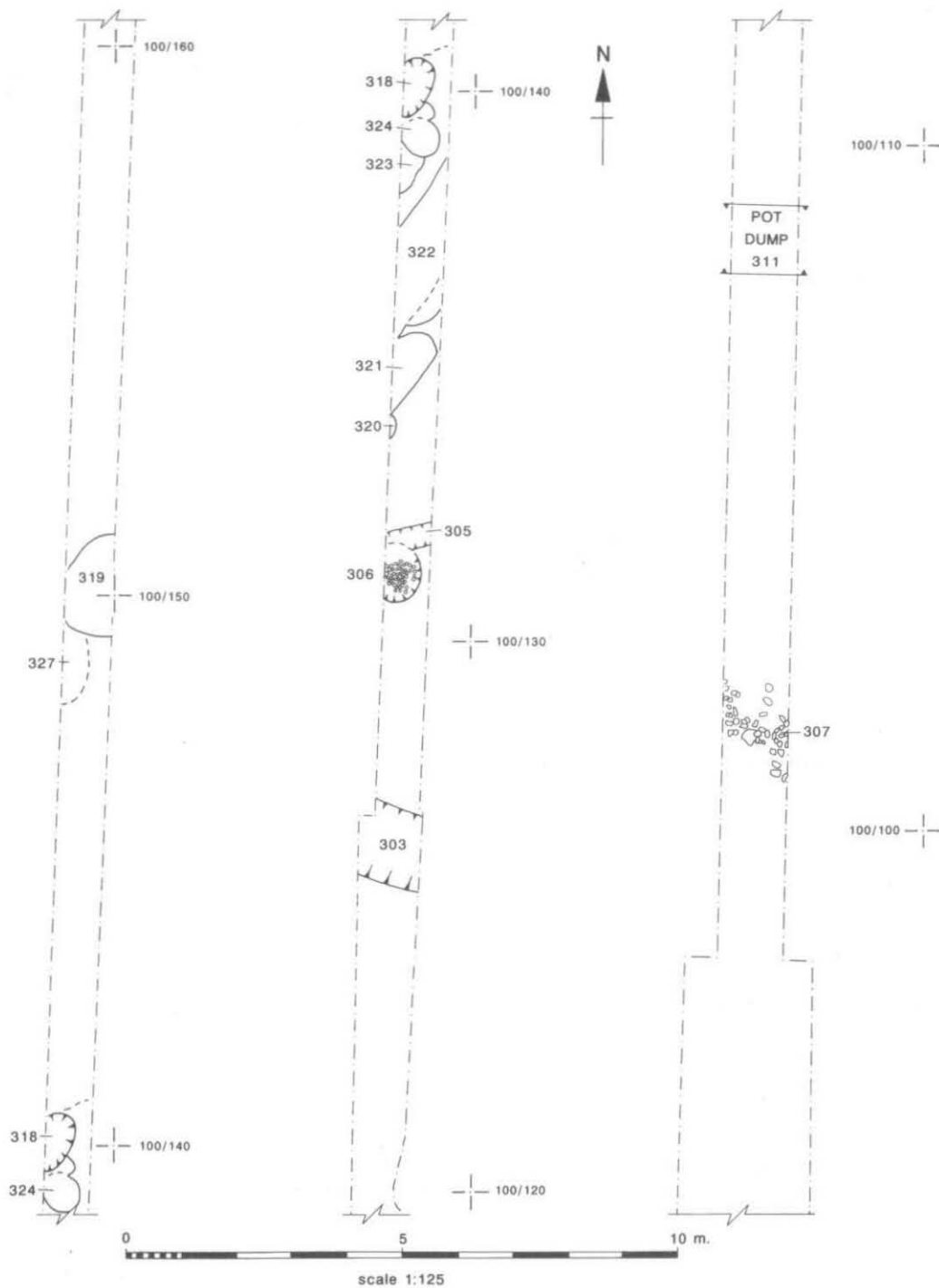


Fig. 16. Lower Farm, Nuncham Courtenay: south end of trench.

## PHASE I: EARLY ROMAN FEATURES

The early Roman features were dispersed across most of the excavation. They occurred to the N. of the domestic area and beneath the features in the N. half of the 'workshop' area. A discrete area of mostly late 1st to early 2nd century pottery (311) within the pot dump is described in the relevant sub-section below.

*Figure 13:* Cobbled surface 186 lay at the N. extremity of the trench. It comprised rounded limestone lumps with occasional pebbles. The pebbles were quite different from the angular natural limestone fragments found elsewhere on the site. The nature of the surface could not be determined with certainty, but it may have been a trackway or yard surface.

*Figure 14:* Ditch 137 cut ditch 136, though both contained late 1st/early 2nd century ceramic assemblages. Ditch 137 also cut a further feature, 138, which by definition must also be of early Roman date. The earlier ditch, 136, was 0.7 m wide and 0.25 m deep, with a flat bottom and sides sloping at 60° from horizontal. The later ditch, 137, was 1 m wide and 0.38 m deep, with a U-profile and sides sloping at 60–70° from horizontal. Ditch 128, 0.45 m wide and 0.2 m deep, was U-profiled with sides sloping at 80° from horizontal. A possible interruption at the E. end of the ditch may simply be due to local surface conditions. A pronounced bulge at the W. end probably represented a separate feature, perhaps a pit, but this was not investigated and its nature and date are therefore unknown. Feature 212 was a U-profiled ditch, 1.05 m wide and 0.35 m deep. It cut layers 206 and 213; these overlay the natural limestone surface. The character of the deposits could not be determined in the limited exposure possible, but 213 contained a small assemblage of Iron Age and early Roman pottery. All of these features were aligned approximately E.–W., although ditch 136 appeared to be turning sharply to the S.W.; it is possible that 136, 128 and 212 are related, but obviously this cannot be proved on the available evidence.

*Figure 15:* A shallow gully (160) was orientated N.–S. It was cut by an early Roman posthole (183), and by later Roman features 127 and 175. Posthole 183 was insubstantial, with a depth of only 0.07 m, and was cut by later Roman feature 159. Posthole 123, to the W. of the gully, was 0.44 m deep, and was virtually contiguous with a smaller posthole (163) which was 0.22 m deep. Posthole 156 lay a further 0.35 m to the S., and was 0.16 m deep. This feature contained a large amount of charcoal in its fill. Posthole 162 lay immediately E. of gully 160, and was 0.17 m deep. Pit 176 lay to the W. of the N. terminus of gully 160, and was cut by later Roman feature 175. The pit was flat bottomed and steep-sided, with a depth of only 0.08 m. It was filled with clay.

## PHASE II: THE KILN SITE

No kilns were located within the excavation areas. It was impossible to determine whether kilns were present elsewhere within the easement because the ridge-and-furrow ploughsoil was left undisturbed after topsoil stripping, and therefore archaeological surfaces were only exposed in the excavation areas. The three zones of activity are described in sequence from N. to S. below.

*The settlement area (Fig. 13)*

The 'settlement' area comprised a series of gullies, pits and postholes in the northern portion of the pipe trench extending for approximately 30 m between ditches 185 and 139. Parts of two possible structures were identified. The first consisted of four postholes (169, 142, 158 and 168) forming an arc in the W. half of the trench. The diameter of the arc is approximately 8.75 m. Two of the postholes (158 and 168) contained infant skeletons. The second possible structure lay 3 m to the S.E. and comprised four postholes (170, 177, 145 and 170). They formed an arc with a diameter of approximately 10 m. An infant skeleton was recovered from posthole 170.

A sub-ovoid pit (178) was cut by gully 179 and may have been slightly earlier than the majority of the features in this area. The pit was 0.20 m deep. The gully was 0.12 m deep and continued beyond the E. edge of the trench excavation, but the W. extension could not be traced. Sub-ovoid pit 180 was 0.3 m deep, and lay immediately S. of 178 and 179. Its fill contained numerous quernstone fragments and pottery. A sub-rectangular feature (151) at the S. end of the domestic area continued beyond the E. limit of the trench excavation; it was 0.22 m. deep, and may have been a pit. Posthole (171), 0.1 m deep, lay the two posthole arcs. A series of linear features (184, 179, 197, 144, 143, 146, 147, 140, 139) crossed the domestic area; several of them terminated within the trench. Features 144 and 147 were aligned approximately E.N.E.–W.S.W., while the remaining features lay on a W.N.E.–E.S.E. alignment (approximate). Further details of these features are available in the archive.

*The workshop area* (Figs. 14 and 15)

The features located in this area included: at least one clay chest (175); shallow pits, usually stone-lined but without any clay filling (109-11, 114, 129, 130, 154-5, 164, 167, and possibly 205, 215 and 218); well 317; a series of linear features (113/118/131, 120, 124-5, 194-5, 210, 217 and 219); pits (121, 191-193, 214, 216 and 222); and postholes (115-116, 119, 126, 127, 152-153, 166, 181, 209, and 220-1). The latter do not appear to conform to structural patterns, but this may simply reflect the limited exposure of the site. Further details are contained in the archive.

Clay chest 175 (Fig. 19) lay at the N. end of the workshop area. It was a sub-rectangular feature with near vertical sides and a depth of 0.28 m. The feature continued beyond the E. edge of the excavation. The sides and bottom had a lining of limestone slabs, some of which had tipped forward into the body of the feature. The stone lining did not survive on the E. side. The slabs typically measured 0.28 m × 0.2 m × 0.07 m. The feature was filled with clay; the matrix became increasingly clean towards the bottom. This feature cut early Roman pit 176 and gully 160.

A series of shallow rectangular pits with flat bottoms were found in Areas 1 and 2 (109-11, 114, 129, 130, 154-5, 164, 167, 205, 215 and 218; see Figs 17 and 18). Most contained limestone slabs lying flat on the base of the pit. The tops of the slabs lay flush with the ground surface. Charcoal was often present in abundance. The stones were absent in some features, possibly due to later activity; there was extensive intercutting among the pits.<sup>34</sup> Features with a few or no stones were categorised together with the stone-filled ones because of the general concentration of the features in Areas 1 and 2 (and especially the former), and also because of their shallowness. The features ranged in depth from 0.1 m to 0.16 m. Sides sloped at between 45° and 90°. All features in Area 1 were covered by a sequence of soils (105-8) containing much late Roman material, especially pottery. These layers did not extend to the N. or S. into the trench excavation.

Pits 205 (0.18 m deep), 215 (0.14 m deep) and 218 (0.19 m deep) lay 25 m N.N.E. of the group in Area 1. The fill of pit 205 contained several limestone blocks laid flat (see Fig. 17). Features 215 and 218 only contained isolated fragments of limestone, but 215 was cut by 218, which was in turn cut by 205. The relative absence of stones may therefore be accidental, although much of 215 was undisturbed by the later features.

Well 317 (Fig. 21) lay at the S. end of the workshop area. The E. half and N.W. corner were manually excavated, while the rest of the fill was removed mechanically. Work proceeded to a maximum depth of 2.5 m, representing the maximum depth of the water pipe trench. The bottom of the well was not reached. A series of steps had been cut into the N.W. edge of the well. Five fills were defined. The bottom fill, 317/A/4, was a saturated silty clay with poor preservation of organic matter. It occupied the limestone-lined, 0.9 m diameter bore of the feature and appeared to represent initial infilling after the well had gone out of use. The fills above this lay within a stepped construction pit and consisted of later infill. Large quantities of pottery, fired clay and kiln debris occurred throughout the fill of the well.

Gullies 124-5 (probably the same feature), 210, 194 and 195 crossed the trench from E. to W.; 210 could not be traced into the trench excavation. Gully 124-5 marked the N. extent of workshop features in the trench excavation, although Area 2 lay to its N.E.; it therefore need not represent a zonal internal division within the site. Gully 194 was cut by the clay chest (175), and in turn cut the early Roman gully, 160. Gully 120 ran from N. to S., was cut by pit 191 and pit 122, and in turn cut pit 121. The gully appeared to terminate at posthole 152. A gully (113=118=131) in Area 1 was cut by features 110-11, 114, 129, 134-5 and 167. It curved markedly to the S., and was U-profiled. The maximum depth was 0.17 m, though the feature was generally 0.12 m deep. Gully 195 separated features in Area 1 from the well.

*The pot dump* (Fig. 16)

The pot dump was located in the southern portion of the trench, stretching for approximately 80 m from 100/160 to 100/080. Examination of the area to the S. of the excavation trench indicated that the spread continued for at least another 20 m. The depth of the dump varied along its length, partly reflecting the underlying topography because the dump lay in a slight hollow with a gently undulating surface. The variable depth also reflected differential dumping through time, and there were a number of recognisable, discrete areas of dumped pottery which appeared to represent concentrated episodes of discard. Notable among these was context 311 (Fig. 20), comprising a closely confined group of pots, mostly complete although often broken into many pieces. The pottery extended beyond the E. and W. limits of the trench.

<sup>34</sup> Full details and stratigraphic matrices are available in the archive.



Fig. 17. Lower Farm, Nuneham Courtenay: view of the excavations from the S.E., with the pipes being laid; Area 2 is in the foreground.



Fig. 18. Lower Farm, Nuneham Courtenay: view of Area 1 from the W., with the stone packing of features 130 (partly under the balk on the left), 117, 167 and 111 visible from left to right; posthole 119 can be seen at top left, with gully 118 to its right.





Fig. 19. Lower Farm, Nuneham Courtenay: The stone-lined clay chest, 175, viewed from the W.



Fig. 20. Lower Farm, Nuneham Courtenay: view of deposit 311 within the pot dump, seen from the W.

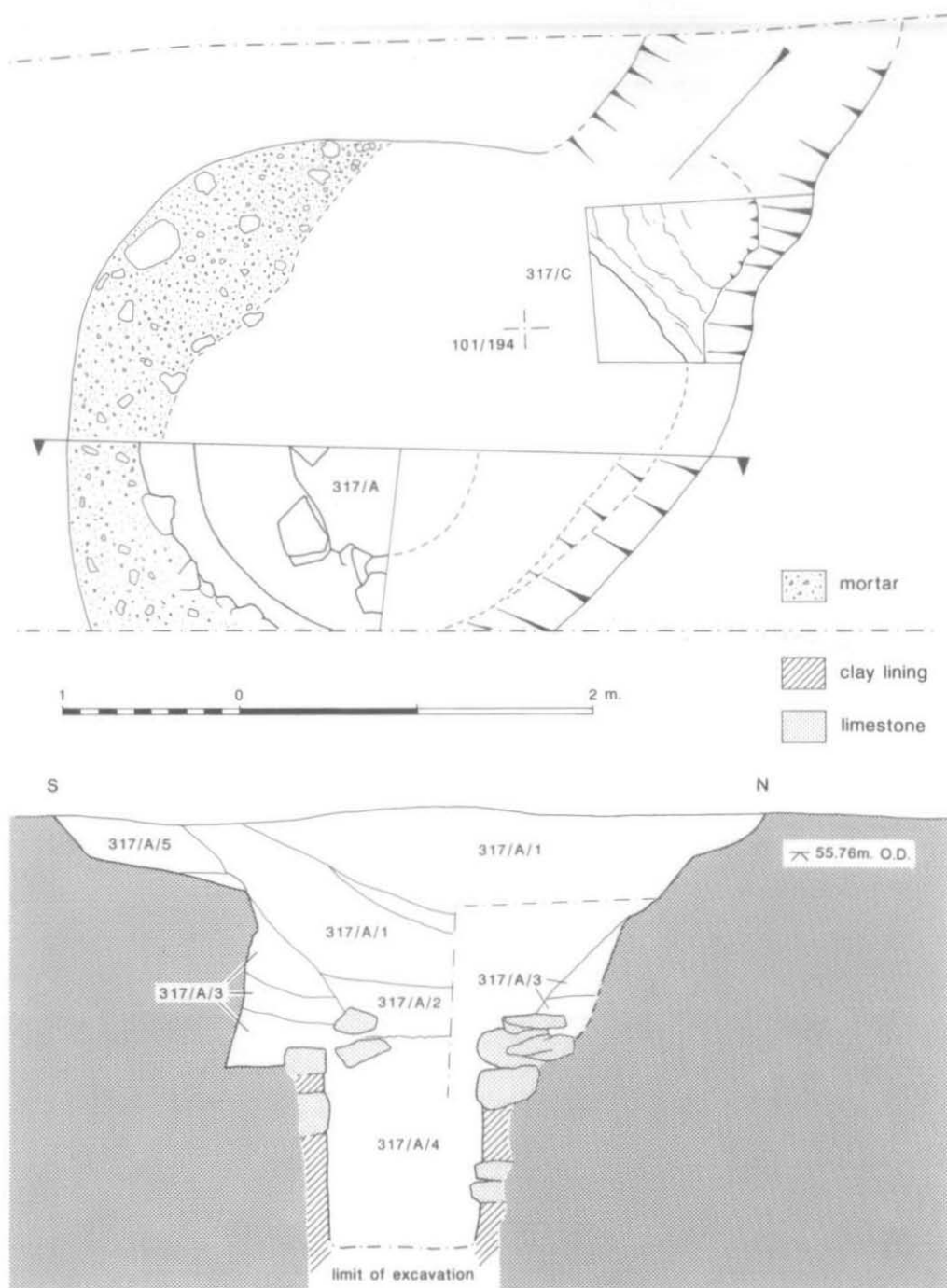


Fig 21. Lower Farm, Nuneham Courtenay: plan and section of well 317.

The remainder of the dump comprised (from latest to earliest) contexts 301 (up to 0.18 m thick), 302 (typically 0.35 m thick), and 314 (typically 0.14 m thick). The latter contained very little pottery in comparison with the overlying layers, which included much ceramic material, often in very dense concentrations. There were also notable concentrations of charcoal within layer 302. The layers were generally homogenous, and indeed they were all very similar in character. A number of 1-m sample areas were excavated in 0.1 m spits. It was hoped that this would determine whether there was any vertical distribution of pottery by date within the layers, but the results were inconclusive. Context 307 consisted of a discrete area of limestone rubble within layer 302 towards the S. end of the dump. The rubble may have been deposited deliberately; it incorporated a virtually complete but shattered mortarium. Pottery from the dump was also recovered from the spoil heap and during pipe laying (context 313, 329 and 330).

A number of pits (306, 318, 319, 323 and 324), ditches (303, 305, 309, 321, 322 and 328) and a possible posthole (320) were found below the pot dump. Unfortunately, little dating evidence was forthcoming, and none of the features was associated with or below demonstrably early parts of the pot dump. Pit 306 was notable in that its fill consisted of closely packed burnt limestone and some charcoal. Details of these features are available in the archive.

### PHASE III: THE RIDGE AND FURROW FIELDS

Remnants of medieval ridge-and-furrow strips survived in the W. third of Lower Field although elsewhere deep ploughing has destroyed all trace of it. Ridges and furrows were on average 6.50 m and 5.00 m wide respectively, with an average distance between ridge centres of 11 m. Layers 300 and 308 over the pot dump consisted of ridge-and-furrow ploughsoil, with a typical combined depth of 0.35 m. Layer 101, also a ridge-and-furrow ploughsoil, had an average depth of 0.15 m. Layer 104 below it had an average depth of 0.07 m. The medieval ploughsoil in Area 2 (200) had an average depth of 0.20 m.

### THE GEOPHYSICAL SURVEY, by M. COLE

#### INTRODUCTION AND METHODS

A geophysical survey was undertaken at Lower Farm with the aim of defining the extent of the kiln site discovered. A limited magnetometer assessment had previously been carried out by Alister Bartlett<sup>55</sup> within the pipeline corridor. This suggested that the site as whole would react well to magnetometer survey.

The survey was carried out during two separate visits to the site, on 27 April–1 May and 5–6 August 1992. The survey was undertaken by S. Fear, N. Linford and M. Cole of the Ancient Monuments Laboratory, English Heritage. An initial magnetometry survey covered both sides of the pipeline corridor in an attempt both to delimit the site and to locate any kilns present. Acting on the results of this initial survey an area was then selected for resistivity survey on a second visit. The positions of certain magnetic anomalies were also relocated and augered in order to investigate them further.

A survey grid of 30-m squares was established for the magnetometer survey on both sides of the pipeline corridor within the present field boundaries (see Fig. 12). Each of these squares was then surveyed using a Geoscan FM36 fluxgate gradiometer. Measurements were taken at 0.25 m intervals along N.–S. traverses 1 m apart within each 30 m square. The resulting data are illustrated in Figure 22. A magnetic susceptibility survey was also carried out, using a Bartington MS2 meter and field probe. Readings were taken at 30-m intervals along each of the N.–S. grid lines. The magnetic susceptibility data are presented in the archive.

Resistivity survey was carried out over a limited area, shown on Figure 22, in an attempt to explain the reason for apparent distortion in the magnetometer survey at the N.W. corner of the survey area. A Geoscan RM15 meter was used, with the Twin Electrode configuration, a mobile probe spacing of 0.5 m and a reading interval of 1 m. The resulting data are presented in the archive.

#### RESULTS (Fig. 22)

As expected, the area proved well suited to magnetometry. A linear pattern of anomalies representing rectangular enclosures is shown very clearly, with an adjacent road or trackway along its western edge. A number of very strong anomalies indicative of kilns, shown as intense 'white spots' on Figure 22, confirm the industrial nature of the site.

<sup>55</sup> Bartlett and Turton, *op. cit.* note 52.

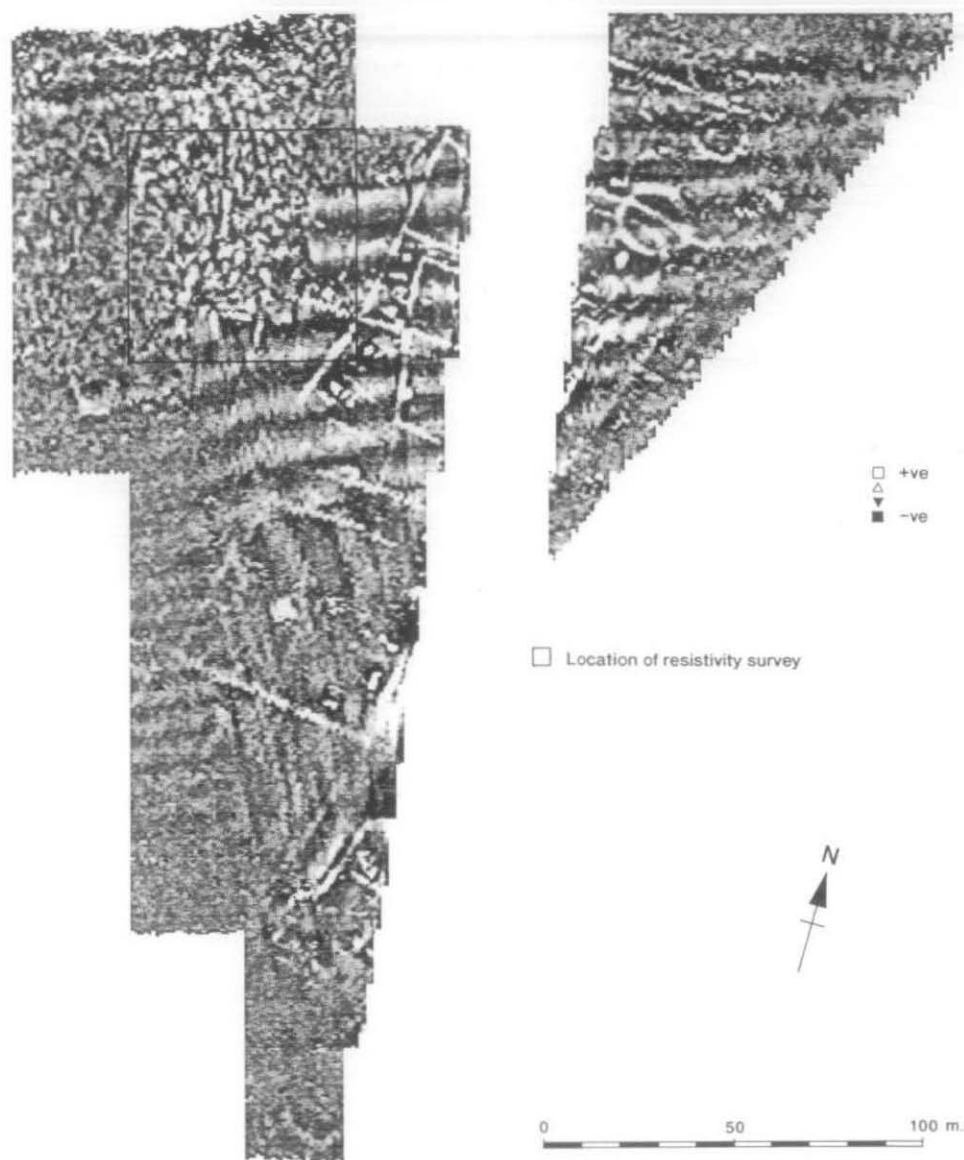


Fig. 22. Lower Farm, Nuneham Courtenay: the magnetometer survey, grey-scale plot of data.

Other archaeologically significant anomalies associated with the enclosures are likely to be pits containing industrial or domestic waste.

A Dutch auger was used to determine the character of some of the apparently industrial features detected. Two suspected kilns were augered and both produced large amounts of fired clay, charcoal-enriched soil and pottery sherds (at a depth of between 0.4–1.4 m). Another localised positive anomaly was augered and this produced several fragments of pottery and charcoal-rich soil.

A number of annular anomalies corresponding to ring ditches have been detected in the NE corner of the survey area. Two of these can be seen clearly whilst a third is indistinct. These appear to underlie the ditch system although this cannot be confirmed on geophysical evidence alone.

The ridge-and-furrow system is also very evident on the plots. The magnetic response has been accentuated by the enhancement of the soil derived from the underlying industrial activity. The magnetically enhanced soil is concentrated in the surviving ridges and has led to these being defined by strong positive magnetic anomalies (represented as white on the plots), separated by weaker anomalies over shallower soil (black: furrows). The differential depth of burial of the ditch system beneath the ridge-and-furrow is also indicated by the light and dark banding of the ditch anomalies. Different orientations of the ridge-and-furrow are also apparent.

### THE FINDS

Details of quernstone fragments and a single fragment of glass will be found in the archive.

#### THE ROMAN COINS,<sup>56</sup> by P. BOOTH

- 1 SF 47, u/s  
Corroded and encrusted. Radiate, possibly Victorinus (AD 268–270).
- 2 SF 6, 103  
Heavily encrusted, slightly ovoid flan max *c.* 21 mm. Possibly radiate (later 3rd century), certainly 3rd or 4th century.
- 3 SF 11, 101  
Corroded. SECURITAS REIPUBLICAE. Mint mark appears to end ON. Such a mark for this issue would indicate London, where the type was struck for Helena. The obverse has a diademed bust. *c.* AD 324.
- 4 SF 10, 205  
Encrusted. GLORIA EXERCITUS (2 standards), mint mark TR.P. Obverse legend very unclear but suggests Constantius.<sup>57</sup> *c.* AD 330–337.
- 5 SF 12, u/s  
Very encrusted. Possibly GLORIA EXERCITUS (1 standard). *c.* AD 330–337.
- 6 SF 17, u/s  
SECURITAS REIPUBLICAE, mint mark of Lugdunum. Valens.<sup>58</sup> *c.* AD 367–375.
- 7 SF 44, u/s  
GLORIA ROMANORUM (emperor holding labarum and dragging captive), mint mark of Lugdunum but end unclear. Valentinian I. *c.* AD 364–375.
- 8 SF 41, u/s  
Corroded. ?GLORIA ROMANORUM (emperor probably with labarum). House of Valentinian, *c.* AD 236–375.
- 9 SF 42, u/s  
Small fragment, encrusted. Probably 4th century.
- 10 SF 14, 107  
Silver, clipped siliqua. URBS ROMA. Valens (obverse and reverse legends partly removed). Minted *c.* AD 364–378 but clipping suggests a date of deposition after *c.* AD 390. Weight 1.17 g.

#### THE WORKED FLINT, by P. BRADLEY

Seventeen pieces of flint and a greenstone axe fragment were recovered from Lower Farm. No diagnostic artifacts were recovered although the blade-like flakes and the serrated flake may indicate a Neolithic date. The scrapers are neatly retouched and would not be out of place in a Neolithic assemblage. The axe fragment is also probably of Neolithic date.

<sup>56</sup> All the coins were AE3/4 of copper alloy and in poor condition, except No. 10, of silver, which was only slightly worn.

<sup>57</sup> P.V. Hill and J.P.C. Kent, *Late Roman Bronze Coinage, Part I* (1976), 64.

<sup>58</sup> R.A.G. Carson and J.P.C. Kent, *Late Roman Bronze Coinage, Part II* (1976), 309.

101	SFs 5, 64	unretouched flakes (1 burnt)	2
	SF 2	blade-like flake	1
102	SF 61	greenstone axe fragment, blade end, damaged	1
106	SF 67	serrated flake	1
133	SF 20	unretouched flake	1
135	SF 52	chip	1
205	SF 66	unretouched flake (burnt)	1
207	SF 16	blade-like flake	1
209/A/1	SF 9	blade-like flake (utilised)	1
302/B/2		burnt unworked flint	1
304	SF 50	unretouched flake	1
		chip	1
317	SF 31	end scraper	1
329	SF 51	unretouched flake	1
u/s	SF 28	end and side scraper	1
	SF 54	tested nodule	1

#### THE HUMAN SKELETAL REMAINS, by A. BOYLE

The remains of seven individuals were recovered, all of whom were less than one year old. Age estimation was based on the ossification and development of the skeleton<sup>59</sup> and dental development.<sup>60</sup> Preservation was variable and this was almost certainly due to the fact that only skeleton 133 was found within a grave. Skeletons 157, 173 and 174 lay in postholes and skeleton 132 across a gully. The remaining skeletons, 107 and 112, were located in layers, unassociated with any features. In keeping with normal practise no attempt was made to sex the infants.<sup>61</sup> No pathology was observed.

##### Sk. 107

Bones present: radius only. Age: 0-6 months?

##### Sk. 112

Bones present: skull vault, humerus. Age: 0-6 months.

##### Sk. 132

Bones present: virtually complete. Age: 0-6 months.

##### Sk. 133

Bones present: skull, scapular humerus, clavicle, femora, tibiae, ribs, vertebrae. Age: 0-6 months.

##### Sk. 157

Bones present: skull, mandible, pelvis, humerus, radius, ulna, femora, tibiae, ribs, vertebrae, phalanges. Age: 0-12 months.

##### Sk. 173

Bones present: fragments of occipital, femur, humerus, ulna, ribs, vertebrae. Age: 0-7 months?

##### Sk. 174

Bones present: fragments of occipital and femur, also the thoracic vertebrae of a slightly older individual (3-6 yrs) and some animal bone. Age: unclear.

#### FIRED CLAY AND KILN DEBRIS, by P. BOOTH

Some 23.3 kg of fired clay was recovered from the site. The material was examined for features which might shed light on the character of the adjacent pottery kilns, but since none of these was excavated the

<sup>59</sup> W.M. Krogman, *The Human Skeleton in Forensic Medicine* (1962).

<sup>60</sup> G. Van Beek, *Dental Morphology* (1983).

<sup>61</sup> Workshop of European Anthropologists, 'Recommendations for Age and Sex Diagnoses of Skeletons', *Journal of Human Evolution*, 9 (1980), 517-49.

analysis was brief. None of the material was in situ. It is likely that most of the fired clay derived from features or objects directly related to pottery production.

### *Fabrics*

The material divided into two main and two minor groups in terms of fabric: (a) coarse and fine sand tempered (7.246 kg, 31.0%), (b) grass or straw tempered (15.539 kg, 66.6%), (c) shell tempered (0.203 kg, 0.9%) and (d) limestone tempered (0.352 kg, 1.5%). The sand tempered fabrics in particular sometimes contained other materials, chiefly shell and limestone, but these were always of secondary importance to the principal inclusion type. The sand tempered pieces were usually oxidised and only moderately hard fired. A small number of pieces were heavily reduced and hard fired. One had slight traces of vitrification on the surface. The grass/straw tempered fragments varied considerably in firing, but were usually moderately hard. The organic voids were characteristically on average *c.* 1 mm across and were usually very clear. They occurred principally on the surfaces of the fragments, but in some cases were also noted in the interior. The minor fabrics are distinctive and used solely for equally distinct and (in the context of the rest of the material) unusual objects.

### *Forms*

Many fragments had traces of one or more surfaces but they were rarely of sufficient size to permit an accurate estimate of shape or function. This was particularly true of the sand tempered fabrics. One heavily fired piece with slight traces of vitrification had a sharply convex surface which might have been consistent with its use as a pedestal or pilaster within the lower part of a kiln, but such pieces were rare and most of the surviving surface fragments were very irregular. A few fragments had impressions of wattles or rounded wooden elements. Many of the sand tempered fragments were amorphous.

In contrast, many of the grass/straw tempered fragments had two surfaces and were roughly flat. They varied in thickness from *c.* 10 mm to 20 mm, mostly falling within the range 15–20 mm (only a very small sample was measured). In addition a few pieces had a straight edge. In the best example this survived to a length of 100 mm. The maximum surviving width of the fragment was 78 mm and it tapered in thickness from 18–19 mm at the straight edge to *c.* 13 mm. The fabric of this piece was a little unusual in containing some substantial lumps of limestone and shell (in this respect it closely resembled fabric d), but it was otherwise comparable to other pieces in this fabric group, though it was better formed than some. Some of the flat pieces had very irregular curved or bent-up edges.

Most of the shell tempered fragments were from a single object in the 2nd-century ditch 138. Part of a roughly-squared section 36 mm × 38+ mm survived, with a minimum length of 90 mm. This could have been from a fire bar of rectangular section, but other interpretations may also be possible. The single limestone tempered piece was of a conical shaped 'loomweight' from pit 220. Such objects are quite common on pottery production sites and a specific function supporting the load in clamp-style firing or in kilns utilising portable furniture has been suggested.<sup>62</sup> However they also occur on sites where there is no evidence that portable furniture was ever used.<sup>63</sup>

### *Distribution by area*

The breakdown of the main fired clay fabrics within the different excavated areas was noted (see Table 3). The 100 and 200 contexts (Areas 1 and 2) contained domestic and workshop features, while pottery dump contexts dominated the 300s. Some striking differences emerge in the proportions of sand and grass tempered fabrics between the areas. Their possible significance is discussed in the following section.

<sup>62</sup> cf. V.G. Swan, *The Pottery Kilns of Roman Britain*, Royal Commission on Historical Monuments Supplementary Series, 5 (1984), 53–4, 119.

<sup>63</sup> For example at Lapworth, Warwickshire, excavated in 1988 (unpublished).

TABLE 3: LOWER FARM, NUNEHAM COURTENAY: QUANTIFICATION (BY WEIGHT G) OF FIRED CLAY BY EXCAVATED AREA AND MAIN FABRIC TYPE

AREA	FABRICS				
	Sand	Grass	Shell	L'stone	Total
100s	1195	7220	203		8618
200s	1175	903		352	2430
300s	3086	7426			10512
U/S	1780				1780
Total	7246	15539	203	352	23340

### Discussion

The fired clay falls mainly into two groups, sand and grass/straw tempered. Although most of the fragments are relatively small there is a very clear morphological distinction between the pieces in the two main fabric groups. The most likely explanation is that the sand tempered pieces derive largely from the permanent parts of kiln structures whereas the grass/straw tempered fragments are from less permanent superstructure elements. The majority of the sand tempered pieces, being oxidised, will probably have come from the upper and outer parts of kiln walls. The few heavily fired and reduced pieces will have been from the interior of the kiln structures. The very limited evidence suggests that these structures were solid constructions with permanent floors, and therefore probably of Young's type 5.<sup>64</sup> A single possible fire-bar in a distinct fabric came from a mid-late 2nd-century context and may indicate that a different type of kiln with portable furniture was in use at that time. The 'loomweight' could possibly also have been used in such a kiln.

The grass/straw fabric group seems to have been used exclusively for 'dome plates' for temporary capping of the kilns. Such plates are common in Oxfordshire industry sites.<sup>65</sup> These varied considerably in regularity, from examples with well formed straight edges to very rough pieces. It is possible that there was some functional difference between these examples, but this need not have been the case.

The generally higher incidence of dome plates rather than other structural elements is to be expected given the nature of the excavated area at Lower Farm. Those parts of the site used for dumping of waste material from the kilns will inevitably have received damaged superstructure material as well as pottery but fragments of the main kiln structures should have occurred less frequently in such dumps. This situation is observed in the dump area (300s see table above) and, curiously, to an even more marked degree in the area to the N. (100s). In the 200s, however, sand tempered fragments are more common than grass/straw tempered ones. Although the sample is small this may indicate that this area was more closely adjacent to the location of one or more kilns. The geophysical survey suggests that kilns concentrated against the long boundaries of the rectilinear plot within which many of them lay. The location of this area, further east than the 100s and thus closer to the plot boundary, and also outside the main dump area, would be consistent with this.

### THE POTTERY, by P. BOOTH

#### INTRODUCTION

The excavations produced *c.* 14516 sherds (189.110 kg, 265.63 EVEs) of Iron Age and Roman pottery, of which some 96.5% (of sherds, 97.1% weight, 98% EVEs) was thought to have been produced on the site.<sup>66</sup> The Roman pottery ranged in date from about the end of the 1st century AD to the mid 4th or possibly a little later. The initial identification of the pottery as deriving from a production site rested principally on the presence of abnormally high proportions of colour-coated wares and mortaria. This

<sup>64</sup> Y, 35–40.

<sup>65</sup> *Ibid.*

<sup>66</sup> A very small quantity of medieval and post-medieval sherds is not reported on here. A further 8 kg of pottery collected from the surface after topsoil stripping within the pipeline easement was not examined in detail (and is not included in the figures in this report). The latter material was extremely fragmentary and apart from a single lead glazed rim added nothing of substance to the information derived from the excavated areas. It almost certainly represented repeated turning over of the top of the Roman deposits by medieval and later ploughing.



impression was subsequently reinforced by the appearance of groups in which these abnormal fabric proportions were echoed by the forms, with multiple examples of a limited number of vessel types occurring. Numbers of wasters and other obviously misfired vessels were generally small, however, with several large groups containing none at all. Nevertheless the majority of the pottery must be seen as production waste. Much of it may have been discarded because it was underfired. The soil on the site was slightly alkaline (bones of the infant burials, for example, were quite well preserved) so conditions should have been favourable for the preservation of pottery. Despite this the slip on many of the colour-coated sherds is poorly preserved and surface erosion is common in other fabrics as well. Underfiring, leaving the resulting surfaces vulnerable to degenerative processes, may be the best explanation for this.

The character of deposits from which the pottery derived varied considerably. Areas 1 and 2 produced groups of material from features related mainly to pottery production. In addition there was a large quantity of pottery from the dump, including material from controlled sampling. Other pottery was collected from the spoil removed from this trench by the contractor's machinery. This material is effectively unstratified but is nonetheless of great importance for understanding the range of fabrics and forms produced on the site. A well (317) produced outstanding groups dating mainly to the late 3rd-early 4th century.

As a consequence of the nature of the excavation the pottery recovered is only a minute sample of what must originally have been disposed of as unsaleable for whatever reason, let alone of the total production. It is impossible to judge whether the sample is truly representative of the overall range of output of the Lower Farm site. There is some evidence for differences in the character of the assemblage in different parts of the pottery dump and it is thus possible that there are aspects of production on the site that are not represented at all in this sample.

It is assumed that most if not all of the pottery in Oxfordshire type fabrics was produced on the site, though it is not possible to be certain about this since the products of individual production sites cannot usually be differentiated. A constant feature of many groups, however, was the presence of a small amount of recognisably non-local pottery (e.g. black-burnished ware and Nene Valley colour-coated ware). The significance of this is not clear since the majority of vessel types in these fabrics were ones which were available locally. However, the presence of this material presumably indicates a domestic rubbish component in many of the groups of what is otherwise a production waste assemblage. This component necessitates caution in interpreting the rest of the material, not least because some of the latter may, like the non-local pottery, have been used domestically before being discarded. It is not possible to separate out this element because the condition of the pottery does not permit an accurate assessment of wear (see above). It can only be hoped (though it cannot automatically be assumed) that the domestically used locally produced pottery was only a very small proportion of the total material recovered from the site and does not significantly distort the evidence for production.

The pottery was recorded using the Oxford Archaeological Unit's Roman pottery recording system, which allows easy comparison between assemblages from different parts of the Oxford region by applying standardised codes for fabrics and forms. Aspects of this are amplified below. Quantification was by sherd count, weight and EVEs (based on the percentage of rim circumferences surviving), with an additional more subjective count of vessels based on individual rim sherds. Details of rim, base, handle, spout and decorative types were recorded. This comprehensive level of recording was felt to be necessary if progress is to be made in understanding the workings of the Oxfordshire Roman pottery industry.

## THE FABRICS

Most sorting and identification was done by eye, with only occasional use of a binocular microscope at x20 magnification. The microscope was used constantly, however, in the compilation of fabric descriptions. There were some problems of identification of fabrics which are usually defined on the basis of their surface treatment alone. The solutions to these problems are discussed under the individual fabrics below.

The fabrics are placed in a number of major ware groups, defined on the basis of significant common characteristics. The ware groups are usually combined to constitute two main classes of material: fine and specialist wares on the one hand, and on the other the rest of the coarse wares,<sup>67</sup> though this distinction has less significance for production site

<sup>67</sup> P.M. Booth, 'Inter-site Comparisons Between Pottery Assemblages in Roman Warwickshire: Ceramic Indicators of Site Status', *Jnl. Roman Pottery Studies*, iv (1992), 1-10.

material than for settlement assemblages. The fine and specialist ware groups (identified by the initial letter of the fabric code) are: samian ware (S), fine wares – colour-coated, lead glazed, mica coated etc – (F), amphorae (A), mortaria (M), white wares – other than mortaria – (W), and white-slipped wares (Q). All of these, with the exception of amphorae, occurred at Lower Farm. The remaining ware groups found at Lower Farm are oxidised coarse wares (O), reduced coarse wares (R), black-burnished ware (B) and calcareous (particularly shell) tempered wares (C).

Within these classes there are subgroups, usually defined on the basis of inclusion type, and individual fabrics/wares are then indicated at a third level of precision. Thus M20 is a general code for mortaria with a white fabric, while the specific Oxfordshire white ware mortarium fabric is M22 (subdivision of this specific fabric, while possible, has not been considered useful here).

The definition of fabrics on production sites is always problematic because of the variation caused in an essentially uniform product by differences of firing, which can result in significant alterations to hardness and colour. Definition of fabrics based on these criteria has not been employed. In general the approach of Young, eschewing minute subdivisions of fabric, has been followed.<sup>68</sup>

All the principal Oxfordshire fabrics discussed by Young (and some hitherto unknown ones) were represented at Lower Farm. The main ones (with their OAU fabric code) were: white ware mortaria (M22), parchment ware (W11), fine white ware (W12), sandy white ware (W22), ?burnt white ware (W23), white colour-coated ware (Q21) and red/brown colour-coated ware (F51). Mortaria in white colour-coated and red/brown colour-coated fabrics have been assigned their own numbers, respectively M31 and M41. Unusual fabrics and oxidised and reduced coarse wares are discussed further below. The total quantities of the local and non-local fabrics are presented in Table 4.<sup>69</sup> The local fabrics are then discussed in some detail, followed by a more summary account of the non-local material, including the Iron Age pottery.

TABLE 4: LOWER FARM, NUNEHAM COURTENAY: QUANTITIES OF OXFORDSHIRE PRODUCTS

WARE	NOSH.	%	WEIGHT	%	NO. VESS.	%	RIM%	%
F25	5	—	45	—	1	—	0.07	—
F35	20	0.1	527	0.3	2	0.1	0.52	0.2
F50	7	—	36	—	—	—	—	—
F51	3440	24.6	50363	27.4	816	31.2	74.20	28.4
F59	117	0.8	1553	0.8	13	0.5	2.35	0.9
OF	125	0.9	1036	0.6	37	1.4	2.60	0.9
RF	1	—	3	—	—	—	—	—
M22	743	5.3	21479	11.7	261	10.0	19.18	7.4
M31	218	1.6	5691	3.1	81	3.1	6.12	2.3
M41	579	4.1	8067	4.4	176	6.7	11.56	4.4
W11	50	0.4	752	0.4	13	0.5	2.22	0.9
W12	607	4.3	6423	3.5	69	2.6	11.11	4.3
W22	153	1.1	1388	0.7	16	0.6	1.48	0.6
W23	12	0.1	145	0.1	5	0.2	0.48	0.2
Q21	418	3.0	5932	3.2	73	2.8	10.95	4.2
OQ	1	—	7	—	1	—	0.03	—
O11	2296	16.4	19583	10.7	278	10.6	28.33	10.9
O21	81	0.6	1192	0.6	14	0.5	1.83	0.7
O29	11	0.1	149	0.1	2	0.1	0.14	0.1
O80	26	0.2	680	0.4	—	—	—	—
R10	3070	21.9	30984	16.9	446	17.0	56.82	21.8
R20	147	1.1	1837	1.0	16	0.6	1.23	0.5
R21	42	0.3	672	0.4	4	0.2	0.36	0.1
R29	7	—	96	0.1	1	—	0.25	0.1
R30	1692	12.1	21760	11.9	257	9.8	26.47	10.1
R33	3	—	122	0.1	1	—	0.09	—
R50	74	0.5	854	0.5	25	1.0	1.60	0.6
R90	58	0.4	2177	1.2	9	0.3	0.38	0.1
TOTAL	14003		183553		2617		260.37	

<sup>68</sup> Y, 202–3.

<sup>69</sup> The figures for the local fabrics are expressed as percentages of the total local fabrics; the figures for the non-local material are expressed as percentages of the total pottery from the site.

The order of discussion follows the standard fabric sequence used by the OAU system, rather than that set out by Young. Well-known fabrics are not described in detail. Colour descriptions use Munsell codes and notation. References to vessel forms use Young's typology as far as possible (for further discussion see the section on Vessel Types below) and his type numbers (e.g. M17, C45 etc) are used without further comment. Approximate numbers of vessels (in brackets) are derived from the figures for rim count. In most cases these numbers will probably therefore be underestimates of the number of vessels represented, but for some of the more common types there is a greater chance that duplicate rims have not been spotted (particularly where they occur in different contexts). Figures for these types have thus been indicated as approximate. The more objective assessment of quantity (by EVEs) is used in the tables and discussion of vessel types below.

## OXFORDSHIRE PRODUCTS

### *Fine wares*

#### *Fabric F25 (lead glazed ware)*

*Description:* fine, hard, light grey to grey fabric (5YR 5.5/1; 7.5YR 6.5/0), sometimes with yellowish-red to brown margins (5YR 4/6; 7.5YR 5/6). Inclusions are well-sorted, rounded quartz and black iron oxides up to c. 0.2–0.3 mm. Both are usually very sparse, though the quartz can be sparse-moderate. There are occasional organic voids and very sparse extremely fine mica. An unstratified sherd, tentatively assigned to this fabric, was entirely oxidised (c. 7.5YR 5/8) with a yellowish brown glaze and in addition to the usual inclusions contained a rounded ?grog lump 1 mm across.

*Surface treatment and decoration:* all sherds are lead glazed, usually on both surfaces, though one closed form has external glazing only. The glaze is usually a medium-dark green, changing to reddish-brown over an underglaze slip. Decorative techniques include the use of grooves and cordons, rouletting and impressed rings.

*Vessel types:* closed form – possibly flagon or flask; ?globular beaker; imitations of Drag. 30 and Drag. 18 (1 each).

Only five sherds of this fabric were recovered from related layers in Area 1, but perhaps significantly a further sherd came from an augured test hole in one of the kilns identified by geophysical survey. These associations, combined with the homogeneity of fabric and glaze, suggest that the sherds were manufactured at Lower Farm. A seventh, unstratified, sherd came from the area of the main pottery dump. It was atypical in fabric, firing and glaze but was assigned to this group on the basis of its close physical association and the fact that neither the fabric nor form seemed to be closely matched in material from other potential sources of lead glazed pottery in southern Britain.

Lead glazed pottery production in Roman Britain has been comprehensively reviewed by Arthur.<sup>70</sup> The Lower Farm material would seem to add another small-scale producer to his list, but without necessarily providing an identifiable origin for already known but hitherto unsorted material. The description of Arthur's South-Central English group<sup>71</sup> suggests that it is sufficiently distinctive in fabric to indicate that it derives from a quite different source. The range of decorative techniques used at Lower Farm does not have obvious close parallels in either the South-Central English group or in the South-East English group produced at Staines. There is one exception to this. The sherd from Littlemore,<sup>72</sup> first recorded by Jope<sup>73</sup> and noted by Arthur as perhaps not belonging to the South-Central English group (on the basis of the fabric) is exactly paralleled by the Lower Farm material in fabric, glaze and the character of the rouletted decoration. Jope's surmise that this piece was 'fairly local'<sup>74</sup> is entirely justified; it can be attributed to Lower Farm with some confidence. The sherd<sup>75</sup> is certainly from a closed form.

Unfortunately the limited excavated sample makes it impossible to assess the significance of fabric F25 in the overall output of the site. The lack of local examples in this fabric, apart from the Littlemore piece, probably indicates that production was on a very small scale. The dating evidence is unclear. The excavated sherds all came from contexts of late 3rd or 4th-century date. By analogy with other centres producing lead glazed pottery, however, a late 1st–early 2nd-century date is most likely.<sup>76</sup> The limited evidence of the vessel forms would be consistent with this.

<sup>70</sup> P. Arthur, 'The Lead Glazed Wares of Roman Britain', in P. Arthur and G. Marsh, *Early Fine Wares in Roman Britain*, BAR 57 (1978), 293–355.

<sup>71</sup> *Ibid.*, 312–17.

<sup>72</sup> *Ibid.*, no. 5.2.

<sup>73</sup> E.M. Jope, 'A Roman Lead-glazed Vessel from Littlemore, Oxfordshire,' *Oxoniensia*, xix (1955), 120–1.

<sup>74</sup> *Ibid.*

<sup>75</sup> Ashmolean Museum accession no. 1953.63b.

<sup>76</sup> Arthur, *op. cit.* note 70, 295.

*Fabric F35 (oxidised mica-dusted ware)*

*Description:* fine, hard, reddish yellow fabric (c. 5YR 6.5/6) with grey core (7.5YR 5.5/0). Inclusions are sparse-moderate well sorted sub-rounded very fine quartz (c. 0.1 mm), with occasional larger quartz grains up to c. 1 mm. Sparse rounded red-brown to black iron oxides (up to c. 0.3 mm) also occur and occasional organic voids were noted in one example.

*Surface treatment and decoration:* the surfaces are coated with a slip containing large amounts of golden mica (this contrasts with the fabric, which contains no mica at all). The slip is a yellowish red colour (c. 5YR 5.5/6) where well-preserved. It may appear only on the interior of open forms, but there are insufficient examples for this to be certain.

*Vessel types:* flanged bowl as Young type O40; bowl with straight, outslipping sides and small internal moulding at junction of base and body wall, reminiscent of Drag. 15/17 but not an exact parallel.<sup>77</sup>

Only 20 sherds of this fabric, many of which belonged to a single vessel (No. 5), were identified. Without the micaceous slip, which was usually extremely poorly preserved, the fabric was indistinguishable from standard Oxfordshire oxidised ware (towards the fine end of the spectrum). Since one of the two identified vessel types is also paralleled in the oxidised ware repertoire (and the other seems to be a one-off type) the forms are unlikely to assist in identifying the fabric. It is possible therefore that the fabric is significantly under-represented in the present data, though this is considered unlikely. Vessel No. 5 came from the same context (112) as most of the lead-glazed sherds, an association which is probably significant. Production of mica-dusted pottery in Britain is thought to have ended generally by c. AD 150,<sup>78</sup> and a probable late 1st-early 2nd century date for the Lower Farm sherds (supported by the later 1st century date of the oxidised ware parallel for No. 5)<sup>79</sup> would be consistent with the suggested date of the lead glazed sherds. In view of the similarity of its fabric to the standard oxidised ware it is likely that F35 was produced at Lower Farm, though as with the lead glazed ware such production may have been on a small scale. Probable examples of F35 have been found on local sites, however, so its manufacture was clearly more than just experimental.

*Fabric F50 (red/brown colour-coated ware)*

This is a general code for major British colour-coated fabrics. It is usually applied to oxidised sherds with a red/brown slip but without other obvious diagnostic characteristics of fabric, form or decoration, and about whose identification there is some doubt. In the case of Lower Farm the code has been used for sherds which are likely to have been of F51 or F59 (see below). It is possible, however, that some may not have been Oxfordshire products. Only seven sherds were assigned to this category.

*Fabric F51 (red/brown colour-coated ware)*

*Description:* as Young,<sup>80</sup> with the exception that mica is generally conspicuous by its absence from both the fabric and the slip. The slip was often very poorly preserved and in some cases was completely eroded away. Oxidised sherds which had almost certainly had a colour-coat (usually defined on the basis of distinctive forms) were recorded as fabric OF (see below). Where the identification was less certain sherds were assigned to the oxidised fabric O11 (see also below). A single reduced sherd without a colour-coat (fabric RF) is also thought to have been F51.

*Surface treatment and decoration:* a wide range of decorative types was used on this fabric. These included grooves, cordons, barbotine, white paint, stamping and rouletting. Barbotine decoration, white paint and stamps were all relatively uncommon.

*Groove:* this was a common technique, occurring on 9% of all sherds in this fabric (311 sherds). Grooves were used on the girth, base of the neck and shoulder of vessels (usually jar forms) and also occasionally under the base. In 15% of cases the groove position was uncertain, though girth or shoulder locations are most likely for these examples. The most common occurrence of grooves was on the interior of open forms, mainly of type C45.

*Cordons:* these were uncommon, with only 12 examples recorded. As with grooves, a base of neck location on jar and bowl forms was most common.

*Barbotine:* this technique was also rare, with only 22 recorded examples, and was probably confined to beakers. Twelve of the examples were of curving lines or scrolls, and in a further five cases scrolls were combined with an animal figure, probably all from a single vessel (No. 49). There were two instances of barbotine scales and one of pellets or dots. In the other cases the motif type was uncertain.

<sup>77</sup> See also a variant form 31 in F. Oswald and T.D. Pryce, *An Introduction to the Study of Terra Sigillata* (1920), Pl. XLIII no. 43.

<sup>78</sup> G. Marsh, 'Early Second Century Fine Wares in the London Area', in Arthur and Marsh, op. cit. note 70, 122.

<sup>79</sup> Y, 196.

<sup>80</sup> Y, 123.

*White paint:* this technique was rare at Lower Farm and where it did occur the paint was often in poor condition, so it is impossible to characterise fully the range of motifs used. Twenty three sherds were recorded with white paint. Scrolls (2), dots (5), semicircles (2), circles (1) and straight lines (2) all occurred, with some (fragmentary) more complex composite schemes. This decoration seems to have been restricted almost entirely to bowl forms (e.g. C48, C52 and C77).

*Stamp:* the use of standard rosette and demi-rosette stamps was extremely rare at Lower Farm, with four and two examples respectively. A linear stamp occurred slightly more frequently (on 15 sherds), usually used vertically on indented beakers between the indentations.

*Name stamp:* there were 19 examples of the use of stamps on the interior of open forms. Several of these were so fragmentary that their character was uncertain. Three of the stamps were in a linear form akin to the ones used on indented beakers, using (in this case) a double row of rectilinear impressions not found on any other vessels at Lower Farm. The remainder were of a style familiar from the Oxford industry. They included, however, a small number of examples displaying an unusual degree of literacy, particularly in the use of a FECIT suffix (unfortunately in the two best examples of this the first part of the stamp is missing). On all examples where the vessel form is identifiable the stamp is used on type C45. In eight examples the stamp is surrounded by a rouletted ring (in one case double),<sup>81</sup> in four examples by a circular groove and once by both. The stamps are discussed individually in greater detail below.

*Roulette:* this was the most common decorative technique on this fabric, being found on 386 sherds (11.2% of the total). It usually occurred as a line or lines, or a band on the upper body of the vessel (flagons, beakers and particularly bowl forms), or as a deep overall zone (on beakers of type C23). These uses accounted for 67% of all examples, and the use of internal rouletted rings on open forms such as C45 accounted for a further 19%. Rouletting occurred less frequently on the rims of forms such as C49.

*Vessel types:* (for mortaria see fabric M41). Examples of C1 (1), C4 (1), C5 (1), C8 (8), C10 (flange only), C12 (1), C13 (1), C14 (1), C16 (8), C18 (c. 14), C20 (1), C22 (c. 25), C23 (2), C25 (body sherds only), C31 (1), C40 (5), C41 (4), C44 (11), C45 (c. 342), C46 (6), C47 (9), C48 (2), C49 (3), C50 (1), C51 (c. 90), C52 (6), C54 (1), C55 (14), C57 (1), C64 (2), C68 (13), C70 (2), C71 (2), C75 (12), C77 (1), C78 (body sherd only), C81 (c. 24), C82 (body sherd only), C84 (3), C87 (1), C88 (c. 20), C101 (11), C102 (base and body only), and C110 (1) were recorded. In addition flagons, jars, beakers, bowls and dishes whose exact type was uncertain also occurred. In one or two cases there were distinct variants of well known Young forms.

F51 was the most common individual fabric at Lower Farm by all methods of quantification. With mortaria (fabric M41) added and including the probable fine ware OF sherds it accounted for c. 30% of sherds and 34% of EVEs. F51 was used for a wide (but not comprehensive) range of vessel types. All the major vessel classes were represented, but there was a very heavy emphasis on bowls, with flagons, beakers and jars all significant but secondary in importance. The representation of other types was at a very low level. Even within the principal vessel classes there tended to be concentration on a limited number of types, with a rather larger number of additional vessels occurring in small numbers. Thus of the 43 Young colour-coated types in the Lower Farm assemblage (listed above) only 17 were represented by 5 or more examples. Almost the same list of 17 types were represented by more than 0.50 EVEs and only 11 by more than 1.00 EVEs. These were C8, C16, C18, C22, C45, C51, C55, C68, C81, C88 and C101. From this abbreviated list of types the emphases of F51 become clear. C8 was the principal flagon type, accounting for 56.7% of all vessels in this class. Jars were represented chiefly by the miniature form C101, but if this is discounted, then by C18 and to a lesser extent C16. C22 was the only significant beaker type and cups consisted almost entirely of examples of C88. Bowls, the majority vessel class in the F51 assemblage, were produced in a wide variety of forms, but only C45 and (to a lesser extent) C51 were really important, the former totalling 52.1% of all F51 bowls and 30.0% of all vessels in this fabric (C51 comprised 21.3% of bowls in fabric F51). C55, C68 and C81, all deeper bowl types than C45, were relatively minor components of bowl output.

A comparable concentration on a single type within a range of types of the same class can be observed in the case of the colour-coated mortaria, which were dominated by type C97. In this instance the explanation may be a chronological one, insofar as C97 was produced throughout the period in which colour-coated wares were manufactured whereas C100 is thought to be an exclusively 4th-century type. It is possible therefore that a similar explanation applies to the breakdown of types in F51, i.e. that types in production from about the mid 3rd century onwards were more common than later examples, because the peak period of production at Lower Farm was in this period rather than in the 4th century. The date ranges given by Young to the 11 most common F51 types do not necessarily support this idea. C8, C22, C51 and C55 are dated AD 240-400+, C16, C18 and C45 from AD 270-400+ while C68 and C81 are suggested to be almost entirely 4th century types. C88 and C101 are not dated at all. The evidence is at best inconclusive.

<sup>81</sup> See C.J. Young, 'The Roman Kiln Site at St Luke's Road, Cowley, Oxford', *Oxoniensia*, xxxviii (1973), 230.

*Fabrics OF and RF*

These fabrics comprise sherds from which the characteristic colour-coat was missing but which were nevertheless thought likely to have originally been of fabric F51 (see F51 above). Their descriptions are therefore covered by that of F51. Grooves and rouletting were noted on fabric OF, and a white painted cross motif (probably concealing remnant colour-coat beneath) on the sole sherd of fabric RF. Vessel types occurring in fabric OF included C8 (1), C45 (18), C47 (4), C51 (2), C75 (1), C81 (4) and C101 (1). Identification of these fabrics often hinged on their occurrence in forms characteristic of the F51 repertoire, hence the use of type numbers from this range to define the vessels in OF.

*Fabric F59*

*Description:* a fine, moderately hard oxidised fabric ranging from 5YR 5/6 to 5YR 6.5/8 (yellowish red to reddish yellow). The core and sometimes the interior surface can be reduced (e.g. 5YR 5/3, 5.5/2); the rare, wholly reduced examples are probably accidents of firing. Inclusions are sparse-moderate rounded quartz up to c. 0.5 mm, sparse rounded iron oxides of similar size and sparse-moderate very fine mica.

*Surface treatment and decoration:* the surfaces are coated with a slip which can vary from red (2.5YR 4/6) to dark reddish brown (5YR 3/1.5) or dark brown (7.5YR 4/3). The slip is restricted to the exterior and very top of the interior of vessels. Decorative techniques include the use of a groove on the shoulder (c. 11% of sherds) and the almost universal application of clay pellet roughcast (on 94 (80%) of the sherds). This is found all over the vessel except for the upper part of the shoulder and rim (the underside of the base is always roughcast) and is covered by the slip. One exceptional vessel (No. 7) has a fine stylised vegetation pattern in barbotine. On the only non-beaker in this fabric (see below) the roughcast decoration is of contrasting white clay pellets and appears to be over the slip.

*Vessel types:* the fabric occurs almost exclusively in bag-shaped beakers of varying size and with a range of rim forms (at least 12 such vessels were indicated by rims). The single exception is a flanged bowl or dish (No. 21) possibly, but not certainly, in F59, with roughcast decoration.

There can be little doubt that this fabric was produced at Lower Farm. The total quantity (117 sherds, 0.8% of the site total) is not large, but the consistency of the forms and their decoration and the character of the fabric seem conclusive. The fabric is essentially the same as the standard Oxfordshire colour-coated fabric F51, but was designated F59 to distinguish it as it seems certain that it represents a quite different phase of fine ware production from the standard late Roman fabric. Almost all the variations in fabric noted in F51 are found in F59, and the preference for a brown rather than a red slip for closed forms also parallels F51.<sup>82</sup> In view of its similarity to the later fabric it is possible that some small sherds of F59 have been recorded as F51, but this is unlikely to have been a major problem. If, as is likely, the bag-shaped beaker was the only common form produced in this fabric there is little chance of confusion between the two fabrics.

The most significant occurrence of F59 was in context 311, a discrete tip deposit within the main pottery dump thought to represent a single deposition event which, if not consisting of redeposited material, is likely to represent an exactly contemporary range of products. Here F59 was associated with a mortarium of type M3, for which a date after AD 150 is likely, and with a range of oxidised and reduced ware vessels. Many of these were of distinctive 2nd-century types, but they included at least six vessels of three types (R12, R51 and R52) dated c. AD 180–240 by Young. Even if such a precise commencement date for these types may be questioned, they are most unlikely to have been in production before the mid 2nd century. The association of F59 with these types strongly suggests that it was in production in the second half of the 2nd century, and perhaps nearer the end than the middle of the century if Young's dates are correct. The forms, however, perhaps suggest an earlier rather than a later date within this range. The precise date remains uncertain. There is no evidence that F59 was associated with the manufacture of the other exotic fabrics F25 and F35.

*Mortaria**Fabric M22 (white ware mortaria)*

*Description:* as Young.<sup>83</sup> Colour varies considerably, as would be expected on a production site. No significant distinctive characteristics of surface treatment/decoration present.

*Vessel types:* M3 (2), M10 (4), M11 (1), M13 (2), M14 (7), M15 (1), M17 (c. 112), M18 (c. 47), M20 (9), M21 (1), M22 (c. 69), M23 (22).

<sup>82</sup> Y, 123.

<sup>83</sup> Y, 56.

This was the most common mortarium fabric at Lower Farm, but M31 and M41 combined were of equivalent importance. The range of vessel types produced was quite wide, being comparable to that from some of the major mortarium producing sites such as the Churchill, St. Luke's Road, Cowley and Sandford. The earlier types were not well represented, M3 being the only one with a date range confined to the 2nd century. It is not necessarily out of place at Lower Farm, however. The association of M3, M10 and M14 (as well as M9) at Blackbird Leys was commented on by Young,<sup>84</sup> with the implication that this was probably significant. The same association is found at Lower Farm and also at Cowley. Indeed, from M3 to M10 is but a short typological step,<sup>85</sup> and M10 may perhaps be seen as a development of M3, supporting a principally later 2nd century date for the latter.

Mortarium production at Lower Farm therefore seems to have started in the second half of the 2nd century, being continuous thereafter. The later 2nd–mid 3rd century vessel types amounted to 9% of EVEs in fabric M22. The second half of the 3rd century saw a significant increase in mortarium production, with large numbers of M17 and M18 appearing. These types, together with the more scarce late 3rd century types M20 and M21, amounted to 60% of EVEs in fabric M22, and since at least some examples of type M22 are probably also datable to this period its importance is clear. Type M22 amounted to 29% of EVEs and was the second most important individual white mortarium type after M17. The range of rim diameters for types M17, M18 and M22 is presented graphically on Fig. 23 and discussed further under fabric M31. M22 must have been the principal 4th century type, though how long it remained in production is uncertain. Two possible examples of type M23 suggest the continuation of mortarium production into the 2nd half of the 4th-century, on the accepted chronology. The identification of these vessels is, however, uncertain. It was on the basis of size alone, since there was no evidence for the decoration or elaborate spouts characteristic of this type, and it is possible that the rims in question were large examples of M18. Two such vessels (with rim diameters in excess of 0.4 m) were indeed identified. There is a considerable similarity of rim form between M18 and M23, and size alone is not a sufficient criterion for attribution to M23 (Young types M18.1 and M18.2 have diameters of 0.42 m and 0.52 m respectively). If the two Lower Farm vessels were in fact of type M18 rather than M23 the case for later 4th century mortarium production would be slight, resting on the possibility that output of M22 continued at this time.

*Fabric M31 (oxidised, white colour-coated mortaria)*

*Description:* as Young<sup>86</sup> except for the absence of mica, also noted in fabric F51.

*Surface treatment and decoration:* the white slip was often poorly preserved. A number of oxidised mortarium sherds had no surviving surfaces and could have been of M31 or the red colour-coated fabric M41 (below). Such sherds, which were usually small, were consistently attributed to M41, the more common of the two fabrics at Lower Farm. This may mean that M31 is slightly under-represented in the record, but this is unlikely to have been a major problem.

*Vessel types:* WC4 (21), WC5 (27), WC7 (33).

This fabric was a relatively minor component of the Lower Farm range of products. The three types produced, however, made a significant contribution to the mortarium output of the site. The interrelationship of these vessels did not exactly reflect the interrelationship of the corresponding white types M17, M18 and M22, though the total quantities of the white-slipped types are perhaps such that not too much significance should be attached to this. Nevertheless, WC4 was slightly more common than WC5 (in terms of EVEs, though not in terms of rim count, but both were less common than WC7 (by both measures)). As with the white mortaria, however, there was still a clear preponderance of 3rd-century over 4th-century types. The total EVEs of WC4 and WC5 amounted to 61% of M31 rims, remarkably similar to the figure of 60% for later 3rd-century white mortaria. Examination of rim diameters (Fig. 24) shows that the 3rd-century M31 types were on average slightly smaller than their white ware counterparts. The most common size for both WC4 and WC5 was c. 0.23 m–0.24 m, contrasting with 0.25 m–0.26 m for M17 and 0.27 m–0.28 m for M18.<sup>87</sup> WC7 and M22, however, had the same most frequent diameter value (0.25 m–0.26 m). There was less variation in the range of diameters in the M31 mortaria than in the white ones, but this may reflect the smaller sample size.

*Fabric M41 (oxidised red/brown colour-coated mortaria)*

*Description:* as F51.

*Surface treatment and decoration:* the slip is sometimes poorly preserved (see also M31). Use of decorative techniques such as white paint and rouletting is extremely rare. White paint is never sufficiently well-preserved to allow identification of complex motifs. Rouletting is more common on examples of type C100 than on C97. Three examples of 'lion' head spouts from mortaria of type C97 (Nos. 170–172) all, unusually, with proper perforations

<sup>84</sup> Y, 70.

<sup>85</sup> e.g. M3.7 and M10.1.

<sup>86</sup> Y, 117.

<sup>87</sup> It should be noted that the most common sizes for M17 and M18 at Lower Farm are exactly the same as for the same types at the Churchill Hospital (S. Green, pers comm).

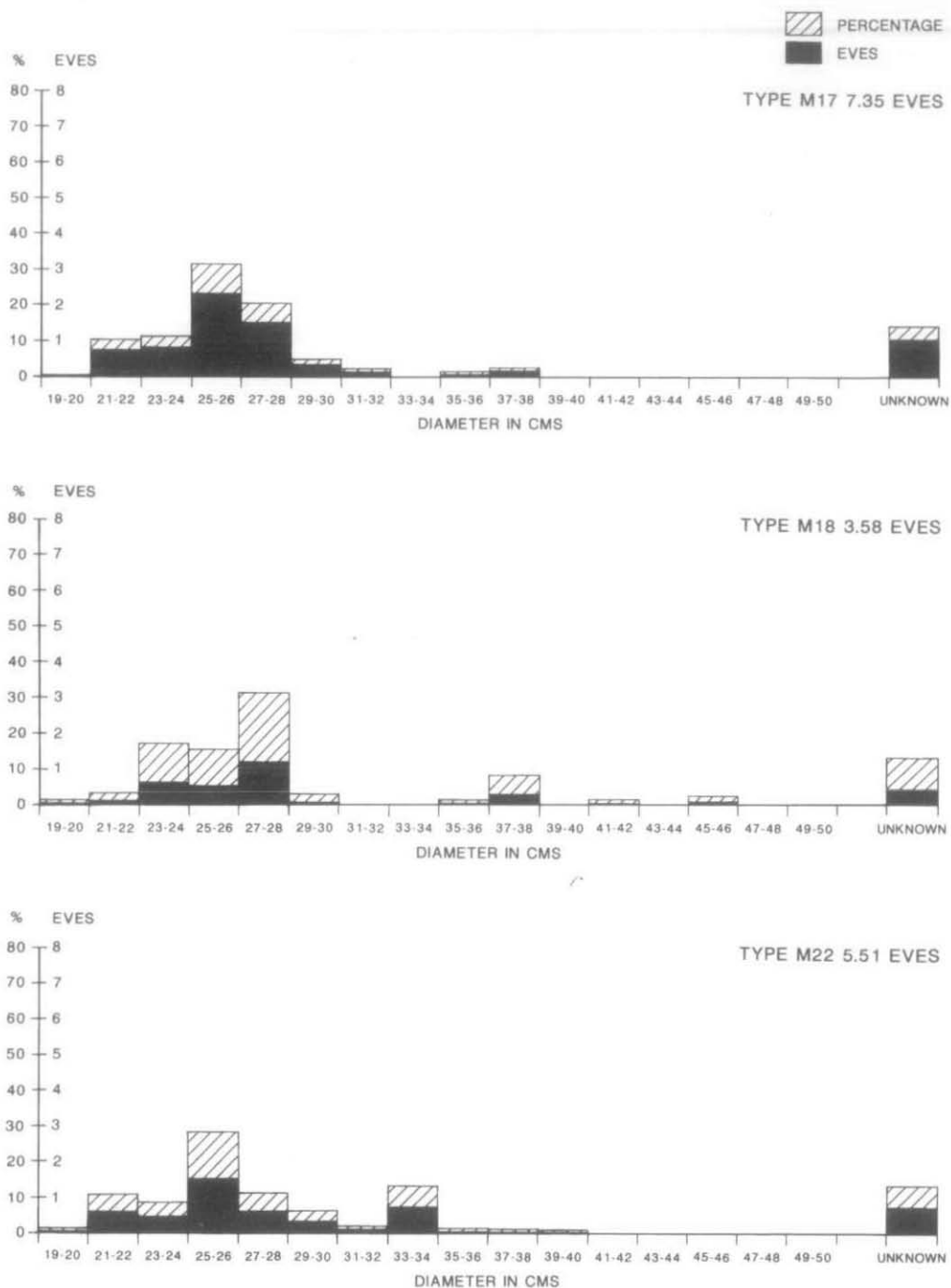


Fig. 23. Lower Farm, Nuneham Courtenay: range of diameters of mortarium types M17, M18 and M22, quantified by EVES and expressed as percentage of total EVES for each type.



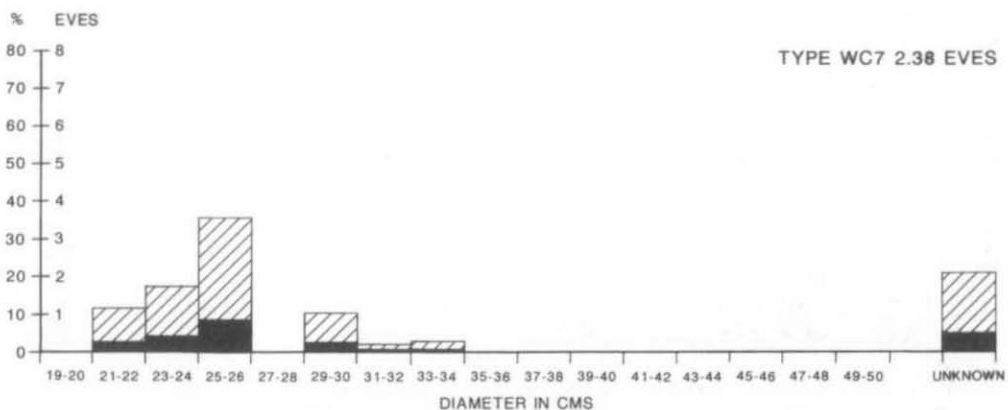
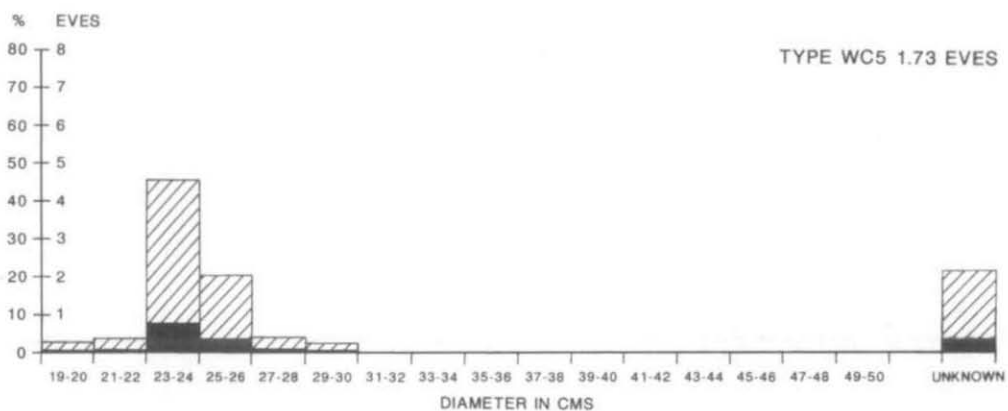
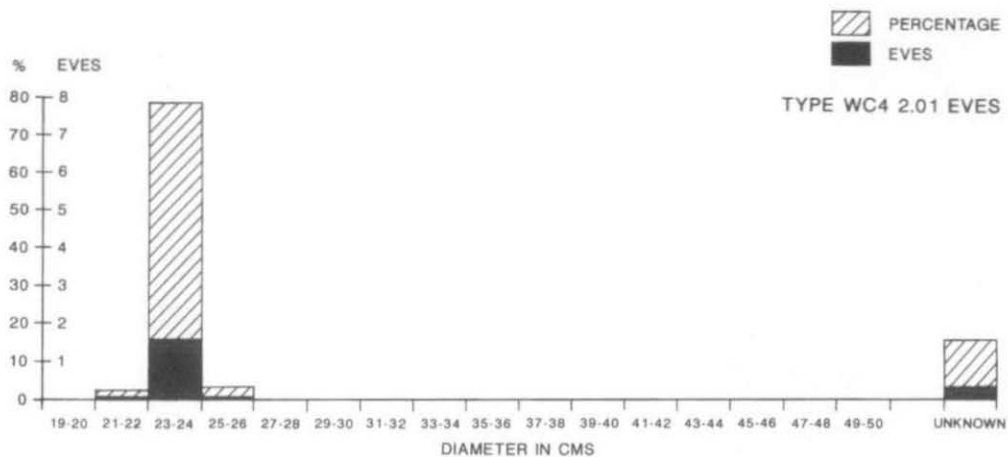


Fig. 24. Lower Farm, Nuneham Courtenay: range of diameters of mortarium types WC4, WC5 and WC7, quantified by EVES and expressed as percentage of total EVES for each type.

through the vessel wall, had additional decorative techniques used in association. On all three pieces a small, impressed, semicircular ring was used to represent eyes and rounded or rectangular indentations to represent ears. Below one spout were incised 'whiskers' and another had wider indentations to serve the same purpose. The use of the impressed semicircular 'eye' motif is paralleled precisely at Farmoor,<sup>88</sup> and a similar device occurs alongside spouts on two examples from the kiln site at Sandford.<sup>89</sup>

*Vessel types:* C97 (c. 158), C98 (2), C100 (16).

C97 was much the most common vessel in this fabric and was the second most common type (after C45) produced at Lower Farm, amounting to 3.9% of all vessels (EVEs). With its (very rare) variants C97 amounted to 90.8% of fabric M41 vessels. This preponderance over the exclusively 4th-century type C100 and the scarcity of the later 4th-century type C98 suggests that late Roman production of this fabric was perhaps only on a small scale.

The range of rim diameters of C97 was examined. The propensity of this type to fragment meant that diameter measurements could only be obtained from half of 158 rim sherds. These showed a range from 0.13 m–0.26 m, with the bulk of vessels (both in terms of number of rims and EVEs) in the range 0.16 m–0.21 m.

### White wares

#### *Fabric W11 (parchment ware)*

*Description:* as Young.<sup>90</sup>

*Surface treatment and decoration:* smoothing is evident on some sherds. Grooves occur on six of the 50 sherds, and red paint on a further 14. The painted motifs include a horizontal line or lines (eight examples) and an internal ring (one, on type P24). Three sherds had overall red paint, one on the underside of a base. The remaining examples were too fragmentary to allow characterisation.

*Vessel types:* ?P7/8 (11), P24 (2).

The identification of this fabric at Lower Farm is uncertain. Despite Young's assurance<sup>91</sup> the distinction between W11 and W12 is not always easily made, particularly in the absence of large sherds of distinctive forms. The occurrence of the fabric in form P7/8, however, a type which is particularly characteristic of Lower Farm (paralleled closely in white, white colour-coated and oxidised fabrics) might suggest small scale manufacture here, rather than that the few identified W11 sherds were brought to the site from another manufacturing site nearby. The absence of characteristic common types such as P9 and the scarcity of P24, however, certainly indicate that parchment ware production at Lower Farm was of minor importance.

#### *Fabric W12 (fine, sandy white ware)*

*Description:* fine, fairly hard fabric, white to pink (7.5YR 8/3, 8/4) or very pale brown (10YR 8/3) in colour. Inclusions are principally sparse-moderate sub-rounded to rounded quartz, often c. 0.1 mm or less but occurring up to c. 0.4 mm with occasional larger grains up to c. 0.8 mm. Sparse sub-rounded black iron oxides up to c. 0.3 mm also occur.

*Surface treatment and decoration:* surfaces are usually smooth, but burnishing appears to have been rare. Only 16 sherds had traces of overall burnish (though the general comments on the condition of the pottery should be borne in mind here) and there was only one example of horizontal burnished lines. Grooves were used widely (14.5% of W12 sherds had grooves) on a variety of forms, usually occurring at the girth or shoulder. Cordons were much less common. Lozenge-shaped panels of barbotine dots were noted on 10 sherds; in one case this was done in contrasting red paint on a bowl of type W53. Thirty sherds (5%) had red paint decoration, usually of circles or rings (24 examples, two in combination with vertical lines). Horizontal lines occurred twice. Twenty six sherds had rouletted decoration, in one instance combined with incised lines. These techniques seem to have been confined to probable butt beaker forms (type W36). A further probable butt beaker sherd had small wedges of barbotine or rustication. Combed decoration occurred on three sherds.

*Vessel types:* W2 (3), W3 (3), possibly W5, W7 (3), W9 (1), W28 (1), W31 (1), W33 (22), W36 (2), W37 (1), W38 (1), W44 (1), W53 (2), W54 (2), W62 (1). Less certain or variant types included two flagons and a jug, jars (6), beakers (3), bowls (4), bowl/dish forms (3) and five vessels of unknown type.

This fabric embraces the definition of Young's white ware fabric 1,<sup>92</sup> but the cut-off point between W12 and the

<sup>88</sup> J. Sanders, 'The Roman pottery', in G. Lambrick and M. Robinson, *Iron Age and Roman Riverside Settlements at Farmoor, Oxfordshire*, CBA Research Rep. 32 (1979), 48–49, no. 6; Y, 175, no. C97.8.

<sup>89</sup> Y, 175, nos. C97.10 and C97.11.

<sup>90</sup> Y, 81.

<sup>91</sup> *Ibid.*

<sup>92</sup> Y, 93.

coarser W22 was no easier to define than that between Young's fabrics 1 and 2. W12 may contain sherds whose fabric is too coarse to fit the criteria for Young's fabric 1. In any case the condition of many sherds means that they cannot be assessed meaningfully with regard to firing and hardness of surfaces.

Vessels include a number of types specifically dated to the 2nd century AD (W36, W37, W38 and W53). W53 is dated to the late 1st-early 2nd century,<sup>93</sup> and the butt beakers also seem more likely to belong to the early part of the 2nd century than later. Just over half of the W12 output (EVEs) was devoted to flagons and jugs. None of these types, however, was necessarily early. The most striking individual vessel was a jug of type W31. This differed from the example shown by Young<sup>94</sup> in not having the frilled cordon at the base of the neck, a characteristic shared with a vessel from Baldock,<sup>95</sup> but was in all other respects identical. It derived from a context (189) which contained only two sherds of the colour-coated fabric F51, the hallmark of later Roman contexts. These sherds (and the black-burnished ware in the group) suggested a later 3rd-century terminus post quem for the group and hence for this example of W31 (a large part of the vessel was extant, so it is unlikely to have been residual). Another unusual jug type, W28, did derive from a probable 4th-century context, supporting the date proposed by Young<sup>96</sup> and indicating the continuation of white ware production into the 4th century at Lower Farm.

W12 was also used for jars, bowls and beakers in that order of importance. The characteristic jar type was W33.6, found in a number of fabrics at Lower Farm. It accounted for c. 80% of W12 jars. The bowls included W53, already referred to, and W54 (two examples, both with red painted decoration).

#### *Fabric W22 (coarse sandy white ware)*

*Description:* cf W12 above. The range of quartz inclusion sizes is as for W12. The inclusions are, however, moderate to abundant in quantity and are usually of the medium size range, up to c. 0.4 mm; larger inclusions are still uncommon. Sub-rounded iron oxides, clay pellets and sandstone are all occasionally present.

*Surface treatment and decoration:* all surface and decorative techniques are rare. There were two occurrences of burnished zones (one overall), burnished lines, and grooves, and one of cordons.

*Vessel types:* W33 (5), W36 (1), W46 (1), W73 (1). There were eight further jars whose exact type was uncertain.

This fabric was of minor importance by comparison with W12. The range of vessel forms was rather different from W12. In particular W22 was not used for flagons and jugs, although there was one example of a butt beaker, normally to be expected in a finer fabric. Jars were the principal vessel type, amounting to c. 61.5% of EVEs. About half of these were of type W33, the remainder being undiagnostic examples. The most unusual vessel in W22 was a probable crucible rim of type W73 (No. 208), from a context (108) most likely to be of late 3rd century date.

#### *Fabric W23 (burnt white ware)*

*Description:* as Young.<sup>97</sup>

*Surface treatment and decoration:* the characteristic 'burnt' surfaces appear to occur overall. There is no decoration.

*Vessel types:* BW2 (5).

Only 12 sherds of this fabric were recorded at Lower Farm. Its infrequent occurrence meant that there was some doubt as to whether the sherds were really a deliberate product or accidentally burnt examples of W22. The consistency of the sherds does suggest, however, that burnt white ware was intended, though where there was any doubt sherds were assigned to W22. W23 may therefore be under-represented by the sherd count figures given above, particularly since the unusually high proportion of rims (five out of 12 sherds) suggests that body sherds may have been attributed to W22.

### *White slipped wares*

#### *Fabric Q21 (oxidised white colour-coated ware)*

*Description:* as Young,<sup>98</sup> except that in common with most other Lower Farm fabrics, mica is absent. In a few examples the reduced core noted by Young<sup>99</sup> is very prominent.

<sup>93</sup> Y, 107.

<sup>94</sup> Y, 103.

<sup>95</sup> V. Rigby, 'Stratified Groups of Late Iron Age and Roman Pottery', in I.M. Stead and V. Rigby, *Baldock, Britannia Monograph 7* (1986), 335, no. 482.

<sup>96</sup> Y, 105.

<sup>97</sup> Y, 113.

<sup>98</sup> Y, 117.

<sup>99</sup> *Ibid.*

*Surface treatment and decoration:* in well-fired examples the slip is white and of good quality, but on many sherds it has almost entirely disappeared. Grooves occur on six sherds, otherwise decoration is confined to the use of red paint on type WC3 (nine examples). This usually takes the form of horizontal bands, with two instances of fragments of more complex internal designs and two in which the red paint is applied overall.

*Vessel types:* (for mortaria see fabric M31). WC1 (7), WC2 (c. 54), WC3 (6). All the main types occur. WC1 is used here for a wider range of flagon forms than appears in Young's corpus. Three further flagons and a jug fell completely outside the definition of WC1. Examples of WC2 were almost exclusively in the distinctive form (cf W33.6) found so commonly at Lower Farm in a number of fabrics.

This fabric was much less common than F51 but nevertheless formed a significant part of the output of Lower Farm. The concentration on type WC2 is noteworthy; it amounted to 61.5% of EVEs in fabric Q21, and even with the addition of the mortaria (fabric M31) it still totalled 39.4% (EVEs) of all white-slipped vessel types. The relatively wide range of forms (though not the absolute quantities) of flagons and jugs is also notable. Together they amounted to 32.4% (EVEs) of Q21 vessel types.

Sherds of Q21 occurred in a number of contexts from which fabric F51 was absent, most notably in ditch 138. There were no types from this feature which need have dated later than the 2nd century. The Q21 sherds included a rim of a ring-necked flagon of type WC1, which seems to confirm that this type should be dated earlier than the rest of Q21 production.<sup>100</sup> A date at least as early as c. AD 200 is likely on this evidence.

#### *Fabric OQ*

This oxidised fabric was almost certainly the same as fabric Q21, with the white slip completely eroded. The sole sherd assigned to this fabric was a rim fragment probably of type WC3.

### *Other oxidised wares*

#### *Fabric O11 (fine sandy oxidised ware)*

*Description:* A fine, fairly hard fabric ranging from yellowish red (5YR 5.5/6) to reddish yellow (7.5YR 5.5/6, 6.5/7), sometimes with a dark grey or grey core (5YR 4/1, 5/1). The inclusions are rounded quartz, iron oxides, clay pellets and white ?chalk. All are sparse and range up to c. 2 mm in size, though a maximum size of c. 0.5 mm-0.8 mm is most common. In addition sparse to moderate fine mica is usually present.

*Surface treatment and decoration:* 50 sherds (2.2%) have evidence for burnished zones. In 35 cases the burnish is overall and might represent a surface finish rather than a purely decorative technique, but the condition of much of the pottery does not allow an accurate assessment of the frequency of this treatment. The most common decorative technique was the use of grooves, which occurred on 175 sherds (7.6%). About one third of these were found at the girth and another third on the shoulder, mainly of jar and beaker forms. There were occasional instances of the occurrence of grooves at the base of the neck, inside open forms and under bases. In contrast there were only 8 instances of cordons and other decorative techniques were similarly uncommon, with instances of burnished lines (4), lattice (4), barbotine (one example of self-coloured arcades on the flange of a bowl of type O39), roughcast (9), and white paint (4, comprising dots (2), a semicircle and an uncertain motif). Some of the roughcast sherds may have been of fabric F59 which had lost its colour coat, but some seem to have been genuinely of fabric O11, adding a new decorative technique to those listed by Young.<sup>101</sup> Rouletting was slightly more common, being found on 24 sherds, usually as a single line or lines on the upper body of beakers.

*Vessel types:* O2 (2), O5 (1), O6 (3), O7 (1), O10 (5), O11 (1), O14 (1), O18 (5), O20 (1), ?O23 (body sherds only), O27 (7), O34 (2), O35 (1), O39 (3), O40 (1), O41 (c. 40), O43 (3), O44 (3), O45 (3), O48 (2). Additional forms, either insufficiently well preserved to allow confident attribution to individual types or else new or significant variant forms, included flagons (11), jars (c. 75), beakers (7), a cup, bowls (c. 36), bowls/dishes (c. 40) and unidentified types (15). Body sherds of a strainer were also found.

This fabric embraces the definition of Young's oxidised fabric 1,<sup>102</sup> but as with the white wares the division between fine and less fine fabrics was difficult to define. Definition of the cutoff point was inevitably somewhat subjective and difficult to apply with rigid consistency, particularly when the surface condition of the sherds was so variable. The definition of fairly fine oxidised ware followed here is therefore rather broader than that allowed by Young for his oxidised fabric 1. The sherd totals for O11 probably include some examples (particularly small sherds) of fabrics F51 and Q21 which have lost all traces of their characteristic surface finish. These occurrences are unlikely to have boosted the O11 sherd total significantly.

<sup>100</sup> Y, 120.

<sup>101</sup> Y, 188.

<sup>102</sup> Y, 185.

O11 was one of the major products of Lower Farm, particularly in the 2nd century. It accounted for 16.4% of all sherds, but only 10.7% of weight and 10.9% of EVEs. This discrepancy reflects (in part) the inevitable use of the O11 label for fine oxidised sherds with no other diagnostic characteristics, almost certainly including eroded fragments of what had originally been fabrics F51 and Q21 as well as genuine O11. By definition such sherds would tend to be very small, with the consequence that the average sherd weight of this fabric would be rather below the norm for the site (c. 8.5 g against an overall site average of c. 13.1 g). Notwithstanding its occasional use as a catch-all fabric category, however, the low average sherd weight also suggests that O11 has a genuine tendency to fragment more readily than most other fabrics. Despite this O11 was still (in terms of EVEs) the third most common single fabric at Lower Farm.

The principal products in O11 were jars and flagons (respectively 28.6% and 25.3%, followed by dishes and bowls (16.9% and 13.7%, with uncertain bowl/dish types amounting to a further 5.7%) and beakers (4.6%). The flagons were of a wide variety of types, including several not hitherto recorded by Young. Similarly a large proportion of the jar forms were not closely attributable to specific types. This was perhaps most noteworthy in the case of type O27, one of the most distinctive later Roman vessels. Only a few examples were identifiable, amounting to 0.49 EVEs. Dish O41 was much the most characteristic type of the bowls and dishes, as well as being the most common individual oxidised type. Its occurrence at Lower Farm seems to support the dating suggested by Young,<sup>103</sup> with sufficient examples appearing in 3rd-century contexts to suggest that it was still in production at that time. The beakers were principally angled everted rim types (e.g. O18). A small number of cups, copies of both Drag. 27 and 33 (the latter O43), also occurred. The incidence of samian derived forms was notable, not only with the cups and the O41 dishes (which have a less obvious relationship with the Drag. 18 prototype) but also with the bowls O42, O44 (cf Drag. 36) and O45. One vessel (No. 249), tentatively assigned to type O43, was in fact much closer to Drag. 46.<sup>104</sup>

*Fabric O21 (sandy oxidised ware)*

*Description:* a fairly hard, sandy fabric, as O11 in virtually all respects. The only significant difference is that the quartz grains are moderate-abundant rather than sparse. As with the finer and coarser white wares the distinction is of frequency and not inclusion size.

*Surface treatment and decoration:* there is no clear evidence from Lower Farm that this fabric was commonly burnished. One sherd had burnish inside an open form. Otherwise decoration was limited to grooves (five examples) and cordons (one example only).

*Vessel types:* O6, O10, O11, O29 and ?O34 (1 example each), plus flagon (1), jar (2), bag shaped beaker (1) and bowl/dish forms (4).

*Fabric O29*

*Description:* a rare variant of fabric O21 with the addition of moderate sub-rounded white (?chalk) inclusions up to c. 1.2 mm.

*Surface treatment and decoration:* some sherds had smooth surfaces, but no clear traces of burnish or any other form of decoration survived.

*Vessel types:* O44 (1) and a jar of uncertain form.

*Fabric O80 (coarse tempered oxidised ware)*

*Description:* moderately hard to hard coarse fabric, light yellowish brown (2.5Y 5.5/3, 6/4).

*Surface treatment and decoration:* some sherds appear to have been smoothed. No decoration was recorded.

*Vessel types:* storage jars, though none were represented by rims.

O80 is the general category for all coarse-tempered oxidised fabrics and therefore covers a number of fabric variants, usually with the common characteristic of grog inclusions. Such material was uncommon at Lower Farm and detailed subdivision of the fabric group did not seem worthwhile. One specific non-local fabric in this group, O81, was distinguished consistently (see below). The description given here is a generalised one derived from a number of sherds assigned to the O80 group, essentially an oxidised version of Young's reduced fabric 1.<sup>105</sup> There is insufficient of either this fabric or its reduced equivalent at Lower Farm (R90 below) for it to be clear whether or not the oxidised version is an accidental variant of R90. The firing of both R90 and O80 is often irregular, so it is difficult to be certain if a consistently reduced fabric was what the potters were aiming for.

<sup>103</sup> Y, 196.

<sup>104</sup> Young type O43.1 may be an intermediate vessel between Drag. 33 and 46 (Y, 198).

<sup>105</sup> Y, 202.

*Reduced wares*

Some difficulty was experienced in defining fabric categories which exactly matched those of Young.<sup>106</sup> Sherds were usually assigned to one of the principal subdivisions of reduced wares in the OAU system (although the specific fabric R21 was also used). Nevertheless, the definition of each fabric group was quite restricted and the range of variation within the sherds assigned to each group was relatively small. Therefore while the descriptions given below are theoretically for fabric groups rather than for individual fabrics they are in fact quite precise. Approximate equivalents to Young's reduced fabrics are: Young 1 = fabric R90; Young 2 = fabric R21; Young 3 = fabric R10 (at the fine end of the range), fabric R20 (at the coarser end of the range) and fabric R30 (in the middle of the range); Young 4 = some of R10; Young 5 = fabric R50. A comparison of the range of vessel types in these fabrics is given in Table 5.

*Fabric R10 (fine sandy reduced ware)*

*Description:* a hard, fine fabric ranging from very dark grey (7.5YR 3/0) through dark grey (c. 10YR 4/1) and grey (10YR 5.5/1; 2.5Y 5/0, 5.5/0) to pale brown (10YR 6/3). The principal inclusion type is sparse to moderate fine rounded quartz, ranging from 0.05 mm–0.3 mm, with occasional fragments up to 0.5 mm–1 mm. Rounded iron oxides up to c. 0.3 mm and organic voids also occur sparsely, and some sherds have fine mica.

*Surface treatment and decoration:* a few sherds appear to have traces of a grey slip. Burnishing is common, being found on 540 sherds (17.6%). Exactly two thirds of these sherds are burnished overall; the remainder have burnishing in zones, usually on the shoulder (34 examples), on the top of the rim (39 examples), or both (17 examples). Less common was overall internal burnish on open forms, in some cases combined with external burnishing. Burnished lines and lattice decoration were much less common, occurring on c. 2% and 1% respectively of R10 sherds. Burnished lines were most commonly horizontal or oblique, the latter particularly in groups on the shoulder of jar types. In all but one case the lattice was acutely angled, and was slightly more common as narrow bands on jar shoulders than overall on cooking pot types. Grooves occurred on 16.7% of all R10 sherds. They were most common at the girth (165 examples), but were also frequently used on the shoulder (80 examples) or at the base of the neck (79 examples). Composite uses (almost invariably a combination of these common positions) accounted for a further 48 cases. Grooves on vessel rims, in lower body positions or under bases, were very rare. In 123 cases it was not possible to determine the groove position with certainty, though girth or shoulder locations are likely for most of these sherds. Cordons were much less common than grooves, being found on c. 3% of R10 sherds, almost exclusively in base of neck or shoulder locations. There were only two examples of frilled or notched cordons. Barbotine was relatively common, with 70 examples, the great majority being rectangular or lozenge shaped panels of dots as on R34. Incised triangular panels infilled with barbotine dots defined a diamond shaped space occupied by a probable bird figure (No. 333) on a R64 body sherd. This piece appears to be unique in the Oxfordshire industry, but comparable motifs occur sporadically elsewhere on London-type wares. Other decorative techniques used on fabric R10 were roughcast (31 examples), combed and incised lines (respectively 13 and 9 examples) and rouletting (57 examples). There was a single instance of the use of vertical lines of white paint. Some of the roughcast sherds may, as with the corresponding occurrence of the technique on fabric O11, have been misfired attempts at fabric F59. Nevertheless this explanation is most unlikely to account for all these sherds. It seems clear that roughcasting was a technique used sporadically on a number of fabrics at Lower Farm in the 2nd century.

*Vessel types:* R6 (1), R12 (17), R14 (1), R15 (9), R21 (6), R23 (5), R24 (2), R25 (2), R27 (2), R30 (1), R31 (22), R34 (21), R35 (2), R38 (7), R39 (1), R41 (3), R43 (8), R44 (2), R45 (1), R46 (2), R48 (1), R49 (1), R51 (2), R52 (2), R53 (9), ?R55 (1), R56 (4), R60 (4), R62 (1), R64 (3), R65 (2), R67 (1), R68 (5), R70 (5), R72 (1), R76 (3), R78 (body/base sherd only). Less certain types were a flagon, jars (c. 205), jar/bowl types (18), beakers (10), bowls (7), dishes (3) and bowl/dishes (c. 32). Unidentified types amounted to a further 9 vessels (rim fragments).

This is one of the main products of the Lower Farm kilns. The fabric is perhaps more homogeneous than the description might suggest and is generally fine. Nevertheless the range of vessel types and the consequent date range of the fabric suggest that it has a broader definition than that of Young's reduced fabric 4, to which he assigns a very restricted date range.<sup>107</sup>

Despite being a fine fabric a high proportion of the vessel types occurring in R10 were jars, amounting to c. 61% of all EVEs (see Table 5). Over half of these were of unspecified types (i.e. insufficient survived to allow their attribution to specific forms). Of the remainder, narrow mouthed types (particularly R12 and R15) were especially important, amounting to almost 34% of all R10 jars. The only other significant types were medium mouthed vessels (R21, R23 and R24). R21 was a specifically 2nd-century form, while the others remained in production throughout the life of the Oxfordshire industry. Beakers and bowls were the only significant non-jar types in R10, amounting to 15.1% and 10.2% of vessels respectively. The identifiable beaker types were R31, R34 and R35, all

<sup>106</sup> Y, 202–3.

<sup>107</sup> Y, 203.

2nd-century forms. The range of bowls included the carinated type R64 and the necked bowl R38, the former certainly and the latter probably (in a Lower Farm context) of 2nd-century date. Curving sided types R41, R68 and R70 were also of 2nd century date. Only straight sided bowls seem to have continued through the 3rd-century in fabric R10, a pattern which is reflected by the rather smaller numbers of dishes.

*Fabric R20 (coarse sandy reduced ware)*

*Description:* a hard, sandy fabric, typically grey (e.g. 5YR 4.5/1, 5/1.5; 7.5YR 5.5/1) sometimes with a reddish brown core or margins (5YR 5/3.5). Moderate to abundant rounded quartz from c. 0.1 mm–1 mm is the dominant inclusion type. Sparse rounded iron oxides and clay pellets and occasional white (?chalk) and organic fragments also occur. An uncommon fabric, possibly including examples of Young's fabric 2 as well as sherds at the sandy end of the range of fabric 3.

*Surface treatment and decoration:* 11 sherds had overall burnished surfaces surviving and a further 7 had burnished zone decoration of various types (on shoulder and in uncertain locations). The other decorative techniques in use were burnished lines (5 examples), lattice (1 only), grooves (10) and cordons (1).

*Vessel types:* R43 (2), R53 (1), plus indeterminate jars (10), a beaker and bowl/dish types (2).

*Fabric R21 (coarse sandy reduced ware)*

*Description:* a hard, sandy fabric, usually grey or light grey in colour (5YR 5.5/1, 6.5/1; 7.5YR 6.5/1; 10YR 5.5/1). The principal inclusion is moderate to common rounded quartz up to c. 1 mm, but typically c. 0.5 mm in size. Sub-rounded grog up to 2 mm–3 mm, iron oxides up to c. 1 mm and organic fragments also occur sparsely. Intermediate between R20 and R90. More mixed than R20, with less quartz but with grog instead.

*Surface treatment and decoration:* one possible jar body sherd had a groove at the girth.

*Vessel types:* jars (3) and a straight sided dish.

*Fabric R29 (hard sandy reduced ware)*

*Description:* a very hard, sandy fabric, grey (5YR 6/1.5) with a reddish brown to strong brown core (5YR 5/3 to c. 7.5YR 5/6). Contains abundant sub-rounded or rounded quartz, mainly in the range 0.2 mm–0.4 mm, with occasional grains from 1 mm–2 mm. Very sparse rounded iron oxides also occur.

*Surface treatment and decoration:* the surfaces of one of the two vessels (a jar) have fairly coarse rilling.

*Vessel types:* R1 (1), jar.

Only seven sherds of this fabric (six joining, from one vessel) were found, but they almost certainly indicate a distinct Lower Farm product. The single small flagon sherd (type R1) was originally recorded as fabric R20. It is, however, consistent in every way with the six sherds from the superficially more distinctive jar. Despite the fact that the surface treatment of the latter is unparalleled on the site the character of the inclusions is consistent with that of other Lower Farm products and the vessel appeared to have fine surface cracks suggesting that it was a waster. The firing and surface treatment place the vessel in a later Roman tradition found elsewhere in southern Britain, but R29 is definitely not, for example, an Alice Holt product,<sup>108</sup> despite a more than passing resemblance between the type R1 flagon and Alice Holt type 8.13.<sup>109</sup>

*Fabric R30 (fairly fine sandy reduced ware)*

*Description:* a fairly hard moderately sandy fabric, grey (eg 5YR 5.5/1, 6/2; 10YR 6/1). The principal inclusion, rounded quartz up to c. 1 mm (but typically up to c. 0.5 mm), ranges from sparse to common, but usually occurs in moderate quantities. Other inclusion types are sparse rounded iron oxides up to c. 1 mm, very fine mica and very sparse rounded white (?chalk) lumps occasionally up to c. 3–4 mm.

*Surface treatment and decoration:* burnishing occurred on 11.2% of sherds in R30. Just over half of these instances were of overall burnishing, the remainder consisting of the usual zones on the shoulder (20), top of rim (21) and both together (6), plus a single example of a vertical burnished band. Areas of burnish of uncertain location on the vessel accounted for the rest. Burnished line decoration was comparatively scarce and lattice very rare indeed. The burnished lines were mainly horizontal, with a few examples of vertical and groups of oblique lines. There were two instances of complex curvilinear decoration on jars perhaps of type R16. The most common decorative technique was the use of grooves, which occurred on 14% of all R30 sherds. One hundred of these occurrences were of girth grooves, with shoulder and bottom of neck locations also relatively numerous (49 and 39 respectively). Composite and uncertainly located grooves account for most of the rest of the occurrences. All other techniques were uncommon. Examples of cordons (13), panels of barbotine dots (18), roughcast (2), comb (1), incised lines (1) and roulette (10) were found.

*Vessel types:* R12 (1), R15 (4), R16 (1), R20 (1), R21 (1), R23 (11), R24 (2), R28 (1), R31 (4), R34 (1), R35 (2), R36 (body sherd only), R37 (1), R38 (7), R39 (2), R41 (1), R43 (5), R46 (4), R47 (5), R49 (4), R51 (3), R52 (10), R53 (13), R65 (4), R76 (4). Other forms were: a flagon, a jug, jars (c. 118), jar/bowls (5), beakers (9), bowls (10), dishes (1) and bowl/dishes (15), plus five unidentified vessels.

<sup>108</sup> M. Lyne, pers. comm.

<sup>109</sup> M.A.B. Lyne and R.S. Jefferies, *The Alice Holt/Farnham Roman Pottery Industry*, CBA Research Rep. 30 (1979), 50.

This is one of the principal products at Lower Farm. The dividing line between this fabric and R10 was not always very clearly defined since the two are on the same continuum of more or less sandy fabrics. However, any systematic error in assigning sherds to the two fabrics is more likely to have been in favour of R30 than R10. Production of the two fabrics side by side is likely to have been carried on for much of the life of the Lower Farm production centre, although it is highly questionable that the distinction between them was always a conscious one. Both fabrics show a wide range of forms with considerable chronological diversity, but the range in R10 is rather wider than that in R30 (see Table 5).

TABLE 5: LOWER FARMS, NUNEHAM COURTENAY: REDUCED WARES, CORRELATION OF PRINCIPAL FABRICS WITH YOUNG TYPES, QUANTIFICATION BY EVES; ONLY THOSE FABRICS WHICH HAD IDENTIFIABLE YOUNG TYPES ASSIGNED ARE INCLUDED IN THE TABLE - TYPES NOT REPRESENTED BY RIMS ARE INDICATED AS BS

TYPE	FABRIC R10		FABRIC R20		FABRIC R30		FABRIC R50	
	EVEs	%	EVEs	%	EVEs	%	EVEs	%
R6	0.13	0.2						
R12	7.77	13.7			0.23	0.9		
R14	0.13	0.2						
R15	3.23	5.7			0.77	2.9		
R16					0.11	0.4		
R20					0.16	0.6		
R21	1.65	2.9			0.88	3.3		
R23	0.88	1.5			1.89	7.1		
R24	0.39	0.7			0.20	0.8		
R25	0.38	0.7						
R27	0.42	0.7						
R28					0.32	1.2		
R30	0.15	0.3						
R31	3.55	6.2			0.81	3.1		
R34	2.83	5.0			0.11	0.4		
R35	1.12	2.0			0.16	0.6		
R36					BS			
R37					0.28	1.1		
R38	1.68	3.0			0.99	3.7	0.30	18.8
R39	0.08	0.1			0.17	0.6		
R41	0.24	0.4			0.04	0.2		
R43	1.16	2.0			1.22	4.6	BS	
R44	0.22	0.4						
R45	0.09	0.2						
R46	0.16	0.3			0.25	0.9		
R47			0.06	4.9	0.49	1.9		
R48	0.13	0.2						
R49	0.10	0.2			0.23	0.9		
R51	0.17	0.3			1.17	4.4		
R52	0.28	0.5			1.18	4.4	0.06	3.8
R53	0.50	0.9	0.19	15.4	0.98	3.7	0.15	9.4
R55	0.12	0.2						
R56	0.25	0.4						
R60	0.28	0.5						
R62	0.14	0.2						
R64	0.47	0.8						
R65	0.78	1.4			0.67	2.5		
R67	0.10	0.2						
R68	0.48	0.8						
R70	0.33	0.6						
R72	0.16	0.3						
R76	0.45	0.8			0.23	0.9	0.11	6.9
R78	BS							
OTHER	25.82	45.4	0.98	79.7	12.93	48.8	0.98	61.3
TOTAL	56.82		1.23		26.47		1.60	



All the major vessel classes were produced in R30, with jars the principal component at 54.8% of all R30 types. Bowls and dishes were of almost equal importance, each at about 14% of types, and beakers amounted to 8.3%. Other vessels only occurred in small quantities. Many of the types, particularly jars such as R15, R20, R23, R24 and R38, were long lived ones. There were, however, sufficient examples of specifically early and late types (e.g. R28, R31, R34, R35 and R49; R16, R37 and R53 respectively) to show that fabric R30 was in use throughout the production period at Lower Farm.

*Fabric R33 (fairly fine sandy reduced ware)*

*Description:* as R30 but with the addition of moderate sub angular white (?chalk) inclusions up to c. 1 mm.

*Surface treatment and decoration:* insufficient sherds of this fabric occur to provide evidence about these aspects.

*Vessel types:* There was only one recognisable vessel, a bowl/dish with a bead rim.

Only three sherds were found. The fabric may be seen as an (uncommon) equivalent to the oxidised fabric O29. The angular nature of the white inclusions might indicate that they were deliberately added to the clay body rather than occurring incidentally in it, as was sometimes the case with fabric R30. Conversely, the rarity of the fabric may suggest that, despite their frequency, the white inclusions were an unintentional addition to a standard R30 fabric.

*Fabric R50 (black reduced ware)*

*Description:* a hard, slightly sandy fabric, usually black (c. 5YR 2.5/1) to very dark grey (7.5YR 3/0), often with a reddish brown or reddish grey core (5YR 4/3, 4/4, 5/2). Inclusions are sparse to moderate rounded quartz, usually in the range c. 0.2 mm–0.8 mm.

*Surface treatment and decoration:* burnishing occurred on 21 sherds, a relatively high proportion by comparison with other fabrics. Three quarters of these sherds had overall burnish. Grooves were found on seven sherds and lattice decoration on four more.

*Vessel types:* R38 (1), R43 (minus rim), R52 (1), R53 (4), R76 (1), plus jars (7), a beaker, bowls (2), a dish, bowl/dishes (4) and three unidentified vessels.

This fabric was uncommon at Lower Farm. There is potentially a degree of overlap between this and some sherds of the fine sandy fabric R10, which sometimes had black surfaces. R50 was therefore used to define sherds which were usually more heavily tempered than R10. The balance of vessel types in R50 was tilted more heavily towards bowls and dishes (rather than jars) than in the other reduced fabrics (see Table 5). The total numbers are, however, so small that it is uncertain if this was really significant. Equally it is difficult to define the chronological range with any certainty. A few sherds of R50 are found in late 2nd century contexts and the repertoire of types includes R53, dated AD 240–400+. R50 was probably in production for much of the life of Lower Farm.

*Fabric R90 (coarse tempered reduced ware)*

*Description:* a fairly hard, coarse tempered hand-made fabric ranging from black (7.5YR 2/0) to dark grey (7.5YR 4/0) and grey (7.5YR 5/0), characteristically with a very dark grey core (7.5YR 3/0; 10YR 3.5/1). The inclusions are sub-rounded or rounded quartz up to c. 1 mm, angular grog up to c. 2 mm (occasionally up to c. 4 mm) and burnt organic fragments, usually represented by voids up to 1–2 mm long. All inclusion types vary from sparse to moderately frequent.

*Surface treatment and decoration:* none evident.

*Vessel types:* jars (3) and storage jars (6), the latter broadly of Young types R19 and R20.

This fabric was never common at Lower Farm but occurred consistently in small quantities, totalling 0.4% of the sherds. It was presumably (but not certainly) manufactured there.

## Discussion

A summary of the principal elements of Lower Farm production is given in Table 6. This is expressed in terms of the major ware groups defined above (Wares A in Table 6) and, for comparative purposes, the same data are grouped under the fabric headings used by Young (Wares B in Table 6). Young's fabrics P (parchment ware) and W (fine and coarse white wares and also burnt white ware) are grouped together in our W ware group. Our group M comprises all mortaria, so it includes Young's fabric M and some vessels in his fabrics WC and F. The early fine wares included in our ware group F and not in Young's corpus are placed at the end of the listing of his fabrics.

TABLE 6: LOWER FARM, NUNEHAM COURTENAY: BROAD QUANTIFICATION OF KILN PRODUCTS BY (A) MAJOR WARE GROUPS AND (B) WARE GROUPS AFTER YOUNG 1977

A	Nosh	%	EVEs	%	B	Nosh	%	EVEs	%
F	3715	26.5	79.74	30.6	M	743	5.3	19.18	7.4
M	1540	11.0	36.86	14.2	P	50	0.4	2.22	0.9
W	822	5.9	15.29	5.9	W	772	5.5	13.07	5.0
Q	419	3.0	10.98	4.2	WC	637	4.6	17.10	6.6
O	2414	17.2	30.30	11.6	F	4152	29.7	88.36	33.9
R	5093	36.4	87.20	33.5	O	2414	17.2	30.30	11.6
					R	5093	36.3	87.20	33.5
					Early F	142	1.0	2.94	1.1
	14003		260.37		TOTALS	14003		260.37	

The figures show that reduced wares were the most common element in the Lower Farm production, though in terms of EVEs colour-coated vessels were marginally more important when mortaria are included (i.e. fabrics F51 and M41 combined). Even without the mortaria, fine wares were the second most important element. They were followed by mortaria (all fabrics combined) and oxidised wares. White and white-slipped wares were relatively minor components, but were still sufficiently frequent to be significant.

#### NON-LOCAL PRODUCTS

The non-local, or more correctly, non-kiln site products (quantified in Table 7 below) amounted to 513 sherds (3.5%) weighing 5.557 kg (2.9%) and totalling 5.26 EVEs (2.0%). This figure includes the middle and possible late Iron Age material. Samian and the fine ware fabrics F43 and F46 were the only continental imports represented. Black-burnished ware was much the most significant non-local fabric.

The samian ware was not examined in detail. Most appeared to be Central Gaulish. Forms represented by rims were Drags 27, 31, 279 (2) and 80. There were further possible examples of forms 31, 46 and 79, and a single small decorated sherd. The fine wares were continental imports (F43 from Central Gaul and F46 tentatively assigned to a Cologne/Lower Rhine source) and from the Nene Valley (F52). Types in the latter fabric included beakers, dishes and 'Castor boxes'. Fabrics M21 and W21 were both Verulamium region products, the sherds coming from a hook-rimmed mortarium and a flagon. It is possible that further small sherds of W21 were occasionally missed amongst the sandy Oxfordshire white wares (W22).

TABLE 7: LOWER FARM, NUNEHAM COURTENAY: QUANTITIES OF NON-LOCAL POTTERY

WARE	NOSH.	%	WEIGHT	%	NO. VESS.	%	RIM%	%
S	17	0.1	132	0.1	6	0.2	0.47	0.2
F43	1	-	5	-	-	-	-	-
F46	2	-	14	-	-	-	-	-
F52	76	0.5	606	0.3	8	0.3	0.77	0.3
M21	1	-	11	-	1	-	0.04	-
W21	6	-	71	-	-	-	-	-
E	5	-	45	-	-	-	-	-
O81	13	0.1	132	0.1	1	-	0.01	-
R39	1	-	62	-	1	-	0.10	-
R95	1	-	38	-	-	-	-	-
B11	259	1.8	2713	1.4	65	2.4	3.30	1.2
C10	38	0.3	416	0.2	1	-	0.07	-
C11	29	0.2	295	0.2	5	0.2	0.37	0.1
P	64	0.4	1017	0.5	2	0.1	0.13	-
TOTAL	513	3.6	5551	2.9	90	3.3	5.26	2.0

The coarse wares included a few possible 'Belgic type' grog tempered sherds (fabric E) and pink grogged ware (fabric O81),<sup>110</sup> most common in the 3rd–4th centuries. Positively identified non-local reduced wares were from Alice Holt (fabric R39),<sup>111</sup> and Savernake (R95). C10 was a general code for shell tempered wares of uncertain origin. The common late-Roman fabric, probably including vessels from the production centre at Harrold (Beds.), was designated C11, occurring mainly as jars at Lower Farm.

Black-burnished ware (B11) is the most noteworthy fabric in this group, comprising half the non-local pottery. All the principal vessel types in the later Roman repertoire (cooking pots, flanged bowls and straight sided dishes) were represented in roughly equal proportions (expressed as EVEs), and there was also a fish dish. There were no obvious 2nd-century types.

#### IRON AGE POTTERY

Sixty four sherds (weighing 1017 g) of handmade pottery in a range of fabrics of probable middle Iron Age date were found. Only one sherd was securely stratified in a possible pre-Roman layer (304) beneath the pot dump. One other feature (170) produced one Roman and 15 Iron Age sherds. The remaining sherds were all from Roman contexts.

This material was not fully examined because of its poor stratification. The fabrics were characterised only in terms of their principal inclusion types (usually two, occasionally only one) and are quantified in this way in Table 8. There were three main inclusion types, quartz sand (A), limestone (L) and shell (S), which were found in various combinations. Subsidiary inclusion types were iron oxides (I), grog (G), flint (F) and large angular quartzite (Q). Further details are available in the archive.

TABLE 8: LOWER FARM, NUNEHAM COURTENAY: QUANTITIES (NUMBER OF SHERDS AND WEIGHT) OF HANDMADE IRON AGE POTTERY BY FABRIC

FAB.	A	AI	AG	AL	AS	S	SA	SL	LS	LA	QA	QG	F	TOT
Sh.	13	2	2	1	11	2	9	1	15	3	1	2	2	64
Wt.	149	128	4	3	222	11	83	3	345	24	27	12	7	1017

Only two rims were found, both in sand/shell fabrics. One was a simple slightly outslipping form, while the other was insloping and beaded. Both are common types in the region. The beaded form might belong in the late rather than the middle Iron Age. The only other noteworthy sherd was the stratified piece from layer 304. This was a fairly fine, sand tempered body sherd with a small horizontally pierced lug and overall burnish. It was the only sherd from the collection on which decoration was evident.

#### VESSEL TYPES

Treatment of the vessel types is restricted to those in the probable kiln fabrics discussed above. The assemblage is considered principally in terms of broad classes of vessels in an attempt to characterise the nature of production and the market which it was supplying. The vessel class codes employed in the OAU Roman pottery recording system are used here. They are: A (amphorae); B (flagons and jugs); C (jars); D (uncertain jars/bowls); E (beakers); F (cups); G (tankards); H (bowls); I (uncertain bowls/dishes); J (dishes); K (mortaria); L (lids); M (miscellaneous); Z (uncertain/unidentifiable types). Amphorae and tankards did not occur at Lower Farm, but all other classes were represented.

All the major classes (except lids) are subdivided into groups defined on the basis of characteristics of overall body form/proportions or of distinctive rim types. The resulting types are still more broadly defined than the individual ones used by Young. In practice, difficulty was experienced with some of the latter, particularly some of the less common types where rather disparate vessels have been grouped together for convenience (e.g. type C18), and occasionally with groupings where the verbal description seems at variance with the evidence of the illustrations (e.g. the use of the term 'bowl' to describe dishes and the inclusion of both bowls and dishes within a single type such as R43). Definition of vessel types in this report follows the usage of Webster.<sup>112</sup> Notwithstanding

<sup>110</sup> P.M. Booth and S. Green, 'The Nature and Distribution of Certain Pink, Grog Tempered Vessels', *Jnl. Roman Pottery Studies*, ii (1989), 77–84.

<sup>111</sup> Fabric A, Lyne and Jefferies, op. cit. note 109, 18 – an example of Vessel Class 5B.9, *ibid.*, 46.

<sup>112</sup> G. Webster (ed.), *Romano-British Coarse Pottery: a Student's Guide*, CBA Research Rep. 6 (3rd edition), 17–20.

these problems the bulk of the established typologies worked satisfactorily and Young's vessel types were used wherever possible. Correlation tables of Young types with the OAU codes can be found in the Appendix. The breakdown of the major vessel classes by fabric is shown in Tables 9 and 10, in which the relationship is expressed initially in terms of the proportion of each class occurring in each fabric (Table 9) and then as the proportion of each fabric devoted to individual vessel classes (Table 10).

TABLE 9: LOWER FARM, NUNEHAM COURTENAY: VESSEL TYPES; QUANTIFICATION OF KILN FABRICS AS PERCENTAGE OF MAJOR VESSEL CLASSES - \* INCLUDES FABRIC OQ, SubF ETC = SUBTOTAL OF ALL FABRICS IN WARE GROUP

TYPE WARE	B	C	D	E	F	H	I	J	K	L	M	Z	TOT. EVEs	%
F25								0.5					0.07	+
F35						0.2	7.9						0.52	0.2
F51	35.8	9.0	33.5	33.1	53.3	71.0	2.5	12.0				25.9	74.20	28.5
F59				9.4				3.1					2.35	0.9
OF	3.4	0.1				1.9	0.6	2.1				0.9	2.60	1.0
SubF	39.2	9.2	33.5	42.5	53.3	73.1	14.1	14.7				26.8	79.74	30.6
M22									52.0				19.18	7.4
M31									16.6				6.12	2.3
M41									29.9				11.56	4.4
SubM									100				36.86	14.2
W11		2.7				0.1							2.22	0.9
W12	19.4	3.3		3.4		2.5	3.5					6.3	11.11	4.3
W22		1.1		1.1		0.1					100		1.48	0.6
W23		0.6											0.48	0.2
SubW	19.4	7.7		4.5		2.7	3.5				100	6.3	15.29	5.9
Q21*	12.0	8.4				1.0							2.2	10.98
SubQ	12.0	8.4				1.0							2.2	10.98
O11	24.3	10.0	7.5	5.6	14.1	6.4	31.1	36.1					25.4	28.33
O21	0.8	1.4	7.9			0.1	2.7						1.8	1.83
O29		0.1						0.5					0.14	0.1
SubO	25.1	11.4	15.4	5.6	14.1	6.6	33.8	36.6					27.2	30.30
R10	2.0	42.9	47.0	36.7	18.9	9.6	29.4	17.2		57.0			29.5	56.82
R20	0.8	1.1		0.2		0.1	1.2	1.4					1.48	0.6
R21		0.4						0.3					0.36	0.1
R30	1.4	17.9	12.0	9.5	13.7	6.2	13.2	27.3		29.1		4.5	26.47	10.2
R33								1.7					0.09	+
R50		0.6		+		0.7	3.1	2.4		13.9		3.6	1.60	0.6
R90		0.5											0.38	0.1
SubR	4.2	63.3	59.0	46.5	32.6	16.6	48.5			100		37.5	87.20	33.5
Tot. EVEs	29.57	81.14	2.66	23.33	4.88	60.18	5.17	13.29	36.86	0.79	0.26	2.24	260.37	EVEs
%	11.4	31.2	1.0	9.0	1.9	23.1	2.0	5.1	14.2	0.3	0.1	0.9		

The principal vessel classes produced at Lower Farm fall into four groups: (1) the major types, jars and bowls (together 54.3% of all vessels); (2) flagons and mortaria (together 25.6%); (3) other significant types (beakers and dishes, together 14.1%); (4) and minor types (cups, lids, miscellaneous, indeterminate and unidentified forms, total 6%).

Jars were produced in all the main fabrics and many of the lesser ones. They were most numerous in reduced wares, which accounted for 63.3% of all jars, but the type only comprised 58.9% of all reduced vessels. As a proportion of output jars were most common in the white-slipped fabric Q21 (61.9% of all vessels in this fabric). They were less important in white wares and oxidised fabrics, though even in the latter jars accounted for 30.6% of all vessels. Their representation in fine wares was inevitably much lower, but they did occur, not just as the distinctive miniature form C101.

Many of the jar rims were not assignable to particular types, either within the detailed typology of Young or the broader groupings of the OAU recording system. Some 48% of vessels categorised as jars were not more

TABLE 10: LOWER FARM, NUNEHAM COURTENAY: VESSEL TYPES; QUANTIFICATION OF MAJOR VESSEL CLASSES AS PERCENTAGE OF THE OUTPUT OF KILN FABRICS - \* INCLUDES FABRIC QQ, SubF ETC = SUBTOTAL OF ALL FABRICS IN WARE GROUP

TYPE WARE	B	C	D	E	F	H	I	J	K	L	M	Z	TOT. EVEs	%	
F25								100					0.07	+	
F35						21.2	78.8						0.52	0.2	
F51	14.3	9.9	1.2	10.4	3.5	57.6	0.2	2.2				0.8	74.20	28.5	
F59				93.2			6.8						2.35	0.9	
OF	38.5	4.6				44.2	1.2	10.8				0.8	2.60	1.0	
SubF	14.5	9.3	1.1	12.4	3.3	55.2	0.9	2.4				0.8	79.74	30.6	
M22									100				19.18	7.4	
M31									100				6.12	2.3	
M41									100				11.56	4.4	
SubM									100				36.86	14.2	
W11		97.3				2.7							2.22	0.9	
W12	51.8	24.4		7.2		13.8	1.6					1.3	11.11	4.3	
W22		61.5		16.9		4.1					17.6		1.48	0.6	
W23		100											0.48	0.2	
SubW	37.6	40.9		6.9		10.8	1.2				1.7	0.9	15.29	5.9	
Q21*	32.3	61.9				5.3							0.5	10.98	4.2
SubQ	32.3	61.9				5.3							0.5	10.98	4.2
O11	25.3	28.6	0.7	4.6	2.4	2.4	13.7	5.7	16.9				2.0	28.33	10.9
O21	13.7	60.7	11.5			4.4	7.6						2.2	1.83	0.7
O29		50.0						50.0						0.14	0.1
SubO	24.5	30.6	1.4	4.3	2.3	13.0	5.8	16.1				2.0	30.30	11.6	
R10	1.1	61.2	2.2	15.1	1.6	10.2	2.7	4.0		0.8		1.2	56.82	21.8	
R20	16.9	58.8		3.4		4.1	4.1	12.8					1.48	0.6	
R21		88.9						11.1					0.36	0.1	
R30	1.5	54.8	1.2	8.3	2.5	14.1	2.6	13.7		0.9		0.4	26.47	10.2	
R33							100						0.09	+	
R50		31.9		+		25.6	10.0	20.0		6.9		5.0	1.60	0.6	
R90		100											0.38	0.1	
SubR	1.4	58.9	1.8	12.4	1.8	11.5	2.9	7.4		0.9		1.0	87.20	33.5	
Tot. EVEs	29.57	81.14	2.66	23.33	4.88	60.18	5.17	13.29	36.86	0.79	0.26	2.24	260.37	EVEs	
%	11.4	31.2	1.0	9.0	1.9	23.1	2.0	5.1	14.2	0.3	0.1	0.9			

closely defined (although it is likely that most of them were medium mouthed types). Narrow mouthed jars totalled 18.4%, medium mouthed jars 24.6% and wide mouthed types 6.3%. The narrow-mouthed vessels were largely examples of R12 and R15, usually in fabric R10. The medium-mouthed vessels included a large number of examples of a consistent type (as W33.6) found in fabric Q21 as well as white wares. The type was also noted in oxidised and reduced fabrics (cf. e.g. R23.5), though here the identification tended to rest on the distinctive rim form.

Wide-mouthed jars were almost entirely confined to the colour-coated fabric F51, in which examples of C18 and C101 occurred. The definition of the type depends on the presence of sufficiently large sherds to allow an estimate of rim diameter in relation to girth and height; otherwise, particularly in some coarse wares, there is the possibility of confusion with necked bowl types such as R38. The uncertain jar/bowl category consists largely of probable examples of this latter type, mostly in reduced fabrics. Even if all these had been wide mouthed jars the general scarcity of the type is clear, particularly when it is considered that the major component of the type, C101, was a very small and perhaps functionally specialised vessel. It remains to note that large 'storage jars' in coarse fabrics were represented by only a few sherds of fabrics O80 and R90, totalling 0.27 EVEs. It is possible that some of the larger, medium-mouthed vessels were intended to fulfil a storage function, but the type was clearly of minimal importance at Lower Farm.

Few of the jar types had a closely restricted chronological range. However it is likely that the occurrence of W33.6 and its white-slipped and coarse ware counterparts was more restricted at Lower Farm than Young's

general comment on type W33 would suggest (the type is dated AD 50–400+). The assertion that 'the minor variations of rim form have no chronological significance'<sup>113</sup> appears contentious, at least in this instance. Only one of the 91 instances of the specific rim type noted on W33.6 (in fabrics F51, W11, W12, W22, Q21, O11, O21, O29, R10, R30 and R50) is from a context which *might* have predated the 2nd half of the 3rd century AD. There can be little doubt that this rim type was a hallmark of the later 3rd and 4th centuries at Lower Farm. This does not mean that the occurrence of this type should be universally considered to be of this date, but it is highly suggestive.

Bowls were less evenly distributed among the major ware groups. While they were produced in most fabrics they usually occurred in relatively small numbers (as 10.8%, 13.0% and 11.5% of white, oxidised and reduced wares respectively) and 72.9% of all bowls were in fabric F51. These were principally open bowls with curving sides, a type which, with examples in white, oxidised and reduced wares amounted to 70% of all bowl forms. The other main subdivisions of the bowl class were carinated, straight sided, and necked types. The first of these was also most common in fabric F51, where it included the C81 family. It would also have included the common parchment ware type P24, but this was very rare at Lower Farm, being more numerous in the white-slipped version, type WC3, which amounted to a mere 1.0% of all bowls. Straight sided bowl types (e.g. R43) were found almost exclusively in reduced wares, but were not common (they were supplemented in use at Lower Farm by a number of examples in black-burnished ware). Necked bowls (10.1% of all bowls), the second most common bowl type, were produced in fine, oxidised and reduced fabrics, being most numerous in the last of these.

All the bowl types spanned the chronological range of the industry, the earlier curving sided and carinated types being 2nd-century imitation samian forms in white, oxidised and reduced wares. The number of definite late Roman types in coarse wares was quite low, however, though they did occur (eg type R47 in fabric R30). Examples of types with a wide date range, such as R38, tended to be in earlier rather than late contexts, or in groups containing a high proportion of 2nd-century material.

Flagons (including bottles, flasks and jugs) were produced in some quantities in all the major ware groups apart from reduced wares, in which they did occur but at a negligible level (1.4% of all reduced vessels). In absolute terms flagons were most numerous in fine wares, which accounted for 39.2% of all examples, but as a proportion of fine ware output they only amounted to 14.5% and were much more common in the white fabric W12 (37.4%), the white-slipped Q21 (32.3%) and oxidised wares (24.5%). It is the last which is most surprising, since oxidised flagon production is otherwise largely confined to the Churchill Hospital in the later 3rd century.<sup>114</sup> Oxidised flagon production at Lower Farm may be seen as a supplement to the white vessels, in view of the relative distance of the site from the sources of white firing clay<sup>115</sup>. Also noteworthy is the range of oxidised flagon types, since it includes vessels such as No. 227. A fragment of a similar vessel occurred in a 2nd-century ditch (138), emphasising that the chronological range of the Lower Farm oxidised flagons was as wide as their typological variety.

The white-slipped flagons also exhibited a wider variety of types than hitherto realised, again including probable (later) 2nd-century examples. The date of the white ware flagons is difficult to determine. The majority were of types with a date range from c. AD 100–240 (W2, W3 and W5) with W7 starting a little later. Only W9 and W28 are considered to be later types, assigned to the later 3rd and 4th centuries respectively. There was only one example of each of these later types. This chronological breakdown, if correctly understood, may suggest a change of emphasis in white ware production from flagons in the 2nd and early 3rd centuries to jars in the later 3rd.

Mortaria require little comment in addition to the discussion above under the individual fabrics. They were in production from at least the later 2nd century onwards, occurring in a limited number of fabrics. The accepted chronology of the types represented suggests an enormous boost in this production in the 2nd half of the 3rd century, since not only was white ware production greatly increased at this time, but colour-coated and white-slipped types also appeared in considerable quantities. The extent to which this production continued into the 4th century remains uncertain.

The definition of the beaker vessel class presents more problems than any other because of the combination of parameters of form and decoration (the latter often used as a distinguishing characteristic) with those of size. The difficulties arise much more with coarse ware than with fine ware versions, and are most acute in reduced wares. For present purposes Young's definition of reduced beaker types has been followed, albeit with some reservations. Lower Farm beaker production falls into two main parts. The standard later Roman repertoire in colour-coated

<sup>113</sup> Y, 105.

<sup>114</sup> Y, 186.

<sup>115</sup> It is possible that some of the oxidised flagon sherds were originally white-slipped, although they were carefully checked with this in mind.

wares was preceded in the 2nd (and early 3rd?) century by a variety of beaker types. These included a small number of white butt beakers (W36), and roughcast bag-shaped forms mainly in colour-coated ware (F59), and to a much lesser extent in oxidised and reduced wares as well. There were further examples of these forms in oxidised and reduced wares without roughcast decoration.

Other elements of beaker production of this time were represented by reduced everted rim (R31) and poppyhead (R34) types which amounted to 41% and 33% respectively of all beakers in fabric R10. Most other reduced ware beakers were of unspecific types. The later Roman colour-coated range, supplemented by a very few vessels in oxidised and reduced wares (such as examples of R36 and R37 in fabric R30), also consisted largely of unspecific examples, usually assigned to C22 in the absence of diagnostic characteristics. Only C23 and C31 were confidently identified and represented by rims. C25, for example, was represented by body sherds and there were occasional instances of other types of decoration such as barbotine scales (C28). C31 was only one of a variety of indented beakers which occurred, usually without rims. Overall, however, beaker production in F51 appears as a relatively minor part of the output of that fabric.

Dishes also occurred in the fine ware fabric F51, but again only as a small part of its output (the shallow, open forms C40-C43 and C47-50 were categorised as dishes). Otherwise both principal groups of dishes, straight and curving sided, were found almost exclusively in oxidised and reduced wares. Overall, straight-sided dishes were much more common than curving sided ones (in a ratio of 3:1), particularly in oxidised and reduced wares (more than half of all the curving sided dishes were in fabric F51). There was a particular concentration on straight sided dishes (such as R51-R53) in fabric R30. The incidence of these types shows that the output of dishes in the 3rd century (and perhaps later) was dominated by reduced ware examples. Oxidised straight sided dishes were completely dominated by O41 (40 examples, as against two of O34 and one of O35). While it is possible that this type was in production up to the end of the 3rd century, as Young suggests,<sup>116</sup> the majority of the Lower Farm examples seem to be of 2nd-century date. Dish production, at first principally in oxidised wares, may have been switched mainly to reduced wares at some time in the 3rd century.

The minor and uncertain types are of little significance. The one possible exception to this is the production of cups which, although at a low level, was a recurring element in the Lower Farm output. All of these imitated samian or related types. Hemispherical cups (C110, presumably derived from Drag 40, or the similar Central Gaulish cup)<sup>117</sup> occurred in fabric F51. Imitation Drag 27s were found in both reduced (R62) and oxidised versions, the latter not recorded by Young. Much more common, however, were copies of Drag 33, executed with varying degrees of faithfulness to the original. These were most common in colour-coated ware (vessel type C88), but oxidised (O43) and reduced (R65) versions also occurred. There is insufficient data to determine if the coarse ware examples predated or were contemporary with the fine ware ones, but one O43 variant came from the 2nd-century group 311. Lids were extremely rare at Lower Farm, in line with the observation of Young,<sup>118</sup> but seem to have occurred occasionally throughout the life of the site. All the examples were in reduced wares. The sole 'miscellaneous' form represented in the assemblage was a possible crucible (W73) in white ware.

## CONTEXTS

The pottery was quantified in relation to context types to see if this revealed useful information about distributions across the site or concentrations of particular types of features in different phases of activity. This data is presented in Tables 11 and 12: firstly in terms of the proportion of the total pottery from each ware group occurring in a particular context type, and secondly in terms of the percentage of the total pottery in each context type made up by each ware group. The context types are: (1) unstratified deposits (including arbitrary cleaning layers etc); (2) other layers, principally in the pot dump; (3) pits; (4) postholes; (5) the wells; (6) graves; (7) ditches; (8) gullies; (9) other features (principally features in the workshop area).

Three main context types produced the bulk of the pottery. In order of importance (in terms of number of sherds) these were layers, unstratified deposits, and the well. The first two of these accounted for some 62% of all the sherds and c. 60% of EVEs. The well deposits, some 19% of sherds, amounted to 27.6% of EVEs and were even better represented as a proportion of the total weight.

<sup>116</sup> Y, 196.

<sup>117</sup> K. Greene, 'Imported Fine Wares in Britain to AD 250: a Guide to Identification', in Arthur and Marsh, *op. cit.* note 70, 25, no. 7.

<sup>118</sup> Y, 226.

TABLE 11: LOWER FARM, NUNEHAM COURTENAY: PERCENTAGES OF POTTERY OF MAJOR WARE GROUPS CORRELATED WITH CONTEXT TYPE - QUANTITIES EXPRESSED AS % OF NUMBER OF SHERDS, WEIGHT AND EVES FOR EACH WARE GROUP

CONTEXT TYPE	1	2	3	4	5	6	7	8	9	TOTAL
WARE										
F: Nosh	18.1	34.8	5.9	0.3	33.8	0.2	2.5	2.4	0.2	3715
Wt	17.0	21.1	4.0	0.1	52.3	+	2.4	1.6	1.4	53563
EVEs	18.5	25.5	4.5	0.1	45.3	0.1	2.9	1.5	1.4	79.74
M: Nosh	26.6	37.3	4.5	0.5	24.0		4.0	2.4	0.6	1540
Wt	26.4	33.1	3.2	0.4	30.0		4.9	1.6	0.5	35237
EVEs	24.2	30.4	3.9	0.4	34.9		4.0	1.8	0.5	36.86
W: Nosh	15.2	43.1	7.4	0.2	14.8	0.7	16.8	0.9	0.9	822
Wt	15.7	36.0	4.3	0.1	26.2	0.3	16.0	0.7	0.6	8708
EVEs	8.4	51.0	2.2		23.3		13.8	0.6	0.7	15.29
Q: Nosh	14.1	28.6	7.4	0.7	27.7	0.2	16.5	2.1	2.6	419
Wt	12.4	20.2	4.3	1.5	49.8	0.1	7.6	2.5	1.5	5939
EVEs	26.8	18.4	3.6		42.8		5.4	2.9		10.98
O: Nosh	22.2	56.3	4.1	0.6	9.6	0.3	9.4	1.8	0.7	2414
Wt	27.3	47.6	2.2	0.3	12.7	0.1	8.3	1.2	0.4	21064
EVEs	26.6	47.4	2.2	0.1	16.2		6.5	0.8	0.2	30.30
R: Nosh	18.5	46.3	5.5	0.9	11.2	0.8	15.2	1.0	0.7	5093
Wt	27.8	41.4	3.9	0.4	14.2	0.3	10.6	0.9	0.4	58502
EVEs	27.2	46.4	3.6	0.3	10.7	0.1	9.9	1.1	0.4	87.20
Non-local:										
Nosh	19.5	39.4	11.3	3.3	16.2	0.6	6.2	1.5	1.9	513
Wt	20.4	29.7	7.3	6.3	25.9	0.2	7.5	0.8	1.9	5557
EVEs	27.2	32.1	1.5		32.9	0.6	3.6		2.1	5.26
TOTAL										
Nosh	19.6	42.5	5.7	0.7	18.9	0.4	9.6	1.7	1.0	14516
Wt	23.2	33.6	3.7	0.5	29.8	0.1	7.0	1.3	0.8	189110
EVEs	23.0	36.9	3.7	0.2	27.6	0.1	6.5	1.3	0.8	265.63

In the absence of detailed phasing the approach is perhaps too broad to produce much significant data, but a number of trends do emerge. The main one of these is the contrast between the incidence of high proportions of fine and reduced wares in certain context types. The (limited) assemblages from postholes and graves are dominated by reduced wares, while fine wares are relatively poorly represented. The same is true of ditches, where the quantity of pottery is large enough for this to have been significant. Ditch assemblages not only have high reduced ware and low fine ware representation, but also the lowest representation of mortarium fabrics, the highest incidence of white wares, and one of the highest incidences of white-slipped wares (by sherd count) of all context types. These are principally chronological consequences. The representation of white-slipped wares in the early ditches reflects the occurrence of 2nd-century white-slipped flagons and their tendency to fragment easily. The contrast between the ditch and gully groups is notable. In the latter, reduced wares were relatively poorly represented and fine wares were at an above average level. Mortaria formed a higher proportion of sherds in gullies than in any other context type. The figures are consistent with the occurrence of gullies amongst the later elements in the 'workshop' areas of the site. A similar but not so clear-cut pattern can be seen in the pottery from the other workshop-related features (group 9 in Tables 11 and 12).

Other context types with a relatively high representation of fine wares included layers, unstratified deposits and pits. Reduced wares were more important in all of these, and in the layers and unstratified deposits oxidised coarse wares were also numerically more common than fine wares. All these deposits, comprising the main dump and cleaning layers containing large amounts of material derived from the dump, were mixed, and a range of fabrics in proportions similar to the site average is therefore to be expected.

The well (317) contained an exceptional ceramic assemblage, comprising a large proportion of all pottery from the site. It had the highest representation of fine wares in any context type, approaching 50%. The contents of this group and their significance are discussed in greater detail below.



TABLE 12: LOWER FARM, NUNEHAM COURTENAY: CONTEXT TYPE ASSEMBLAGES  
CORRELATED WITH MAJOR WARE GROUPS - QUANTITIES EXPRESSED AS % OF NUMBER OF  
SHERDS, WEIGHT AND EVES FOR EACH WARE GROUP

CONTEXT TYPE	1	2	3	4	5	6	7	8	9	TOTAL
WARE										
F: Nosh	18.1	20.9	27.0	11.7	45.7	13.8	6.7	36.5	33.1	3715
Wt	20.8	17.8	30.4	5.5	49.7	8.9	9.8	35.3	49.5	53563
EVEs	24.2	20.8	36.6	9.1	49.3	31.6	13.5	34.6	53.3	79.74
M: Nosh	14.4	9.3	8.6	7.8	13.4		4.5	15.2	7.2	1540
Wt	21.2	18.4	15.9	14.6	18.8		13.0	22.5	10.7	35237
EVEs	14.6	11.5	14.5	29.5	17.5		8.5	19.2	8.6	36.86
W: Nosh	4.4	5.7	7.5	1.9	4.4	9.2	9.9	2.9	5.0	822
Wt	3.1	4.9	5.3	0.7	4.1	8.9	10.5	2.5	3.5	8708
EVEs	2.1	8.0	3.5		4.9		12.2	2.5	5.2	15.29
Q: Nosh	2.1	1.9	3.8	2.9	4.2	1.5	5.0	3.7	7.9	419
Wt	1.7	1.9	3.7	9.3	5.3	1.1	3.4	6.0	6.1	5939
EVEs	4.8	2.1	4.1		6.4		3.4	9.0		10.98
O: Nosh	18.9	22.0	12.0	13.6	8.4	10.8	16.3	18.0	12.9	2414
Wt	13.4	16.2	6.7	7.7	4.9	5.0	13.5	10.4	5.9	21604
EVEs	13.2	14.7	6.9	6.8	6.7		11.4	6.5	3.3	30.30
R: Nosh	33.1	38.3	34.1	45.6	20.7	60.0	55.4	20.5	26.6	5093
Wt	37.2	38.2	32.4	24.9	14.8	71.1	46.6	21.4	16.5	58502
EVEs	38.8	41.4	33.6	54.5	12.8	52.6	50.0	29.9	15.7	87.20
Non-Local:										
Nosh	3.5	3.3	7.2	16.5	3.0	4.6	2.3	3.3	7.2	513
Wt	2.6	2.6	5.8	37.2	2.6	5.0	3.1	1.8	7.0	5557
EVEs	2.3	1.7	0.8		2.4	15.8	1.1		5.2	5.26
TOTAL										
Nosh	19.6	42.5	5.7	0.7	18.9	0.4	9.6	1.7	1.0	14516
Wt	23.2	33.6	3.7	0.5	29.8	0.1	7.0	1.3	0.8	189110
EVEs	23.0	36.9	3.7	0.2	27.6	0.1	6.5	1.3	0.8	265.63

## CHRONOLOGY

The dating of the sequence at Lower Farm rests very largely on the pottery, but the limited coin evidence is also useful. The coins are significant in indicating a later date range for the site than that suggested by the pottery (see discussion of fabrics and dating below). The usefulness of pottery for dating depends on a number of factors. It is increased if context assemblages derive from lengthy sequences, all producing reasonable quantities of material. At Lower Farm, however, there are few lengthy stratigraphic sequences which have a substantial component predating the introduction of colour-coated wares, an event which is taken as the cut-off point between the earlier and later phases of the industry. In addition many of the later Roman sequences consisted of layers which were potentially open to contamination and at least some of which possibly represent post-Roman events, even though they may contain little or no post-Roman material. Conclusions drawn from ceramic sequences derived from such deposits may be plausible but nonetheless misleading. Problems of this kind were encountered at Lower Farm, as some of the initial cleaning layers produced substantial and coherent groups of late 3rd-century date, overlying deposits which dated to the early 4th century at least. Thus the construction of a reliable relative chronology was extremely difficult. Many of the comments about chronology are therefore based on a consideration of the character of the total assemblage, rather than on detailed analysis of the evolving nature of individual groups from particular stratigraphic sequences.

The internal problems of the Lower Farm evidence are of course to a considerable degree offset by the existence of Young's comprehensive framework for the Oxfordshire industry as a whole. Setting the Lower Farm evidence against this framework is of value in two ways. It informs the discussion of Lower Farm, placing it in its regional context and perhaps most crucially establishing a chronological outline for the site. In return the Lower Farm evidence can be used to provide the most detailed characterisation yet possible of one of the production sites in the southern part of the industry. Addition of new types to the repertoire of the industry and refinement of the dating of some already established types are obvious benefits.

These processes raise broader questions concerning the nature of typologies and the methods and assumptions that lie behind their construction, with particular reference to the assignment of dates to individual types. It is recognised that these are extremely difficult issues, especially with kiln site material, where independent dating evidence tends to be very limited. Inevitably risks are taken when working with such material in order to extract the maximum information from the data. These risks consist primarily of making assumptions, many of which are commonplace but need to be carefully considered, particularly when they are not always explicitly stated. Repeated reading of Young's corpus suggests that his conclusions have been influenced by (inter alia) the following interrelated assumptions:

- a. That major production centres made most if not all of the principal vessel types.
- b. That the period of production of particular fabrics and types was consistent across the industry.
- c. That absence of certain major types may be significant and that negative evidence will therefore be valid.<sup>119</sup>

While it is not possible (or necessary) to challenge the established framework for the industry as a result of the study of a small excavated part of a single production site, the apparent emphases of production at Lower Farm do prompt consideration of these problems, which underlie much of the debate about aspects of the chronology of the site. There were three levels of dating to be established, though the consideration of any one level is closely linked with the others. They are:

1. The overall date range for the production site.
2. The date range of individual fabrics.
3. The date range of types within the individual fabrics.

The normal approach to these questions would be to proceed from the particular to the general. This procedure, however, is only appropriate to assemblages which include material for which relatively independent external dating is available, however limited this might be in quality and quantity. The distinctive production site character of the Lower Farm material is such that it is useful first to try and establish overall chronological parameters, within which the individual fabrics and forms can be considered.

### *The date range of the site*

This is hard to establish on the available evidence. The date for the commencement of production rests entirely on the pottery. In all parts of the site, including the main pottery dump, the earliest stratified deposits of reasonable size contain material probably assignable at least to the middle of the 2nd century. A few small groups were tentatively assigned to the late 1st-early 2nd century. One example, with five sherds including one of middle Iron Age date, was from layer 213, at the bottom of the sequence in Area 2. This was directly overlaid by layer 206, which contained a colour-coated sherd. The rest of the material in 206, and in ditch 212 which cut 206, was consistent with a late 1st-early 2nd century date. These contexts produced a number of sherds from butt beakers of type W36 (three from 206 and 15 out of 22 sherds in 212), probably from at least four different vessels. The significance of these deposits is uncertain, but it seems very likely that the colour-coated sherd in 206 is intrusive. This group of contexts may therefore date to the late 1st century. W36, however, is dated to the 2nd century by Young who states that no examples of the type are known on kiln sites before then.<sup>120</sup> The date may be open to question since the butt beaker is essentially a 1st-century form, but on present evidence the matter cannot be resolved.

The Oxfordshire coarse ware repertoire contains few types which are datable exclusively to the 1st century and which may therefore be used as indicators of a specifically 1st-century date.<sup>121</sup> The only vessels in reduced wares

<sup>119</sup> Y, 53.

<sup>120</sup> Y, 105.

<sup>121</sup> Indeed the types assigned to this date range are sometimes problematical vessels, e.g. O40 and O55, only one example of each of which is noted by Young.

are bowl/dish forms R40 and R49, both dated AD 50–100 by Young. At Lower Farm five rims were assigned to type R49, four in fabric R30 and one in R10. The type is, however, not a particularly well-defined one, especially in the absence of evidence for the foot ring of the Camulodunum prototype, and it would be impossible to distinguish for example between small rim sherds of R49, R50 and R51. The identification of the Lower Farm examples of R49 may be open to some doubt, therefore, as was recognised in two of the five cases at the time of processing. The apparent presence of the type at Lower Farm cannot therefore be used to establish a firm 1st-century date for the site, particularly since all the examples are found in contexts of the later 2nd century and later. An exclusively 1st-century date for the type as a whole may be regarded as questionable.

The evidence of particular vessel types is therefore unhelpful in establishing the start date for Lower Farm. R49 does not necessarily suggest a 1st-century origin, and while W36 may hint at it, this is not supported by evidence from other production sites within the industry. There is a danger that the argument becomes a circular one, however, in that an assumed date of *c.* AD 100 for the start of production of white wares will then lead to the conclusion that any type in these fabrics must be later than this.

Nevertheless, the evidence of fabrics and forms combined does suggest that a date around *c.* AD 100 is as close an estimate as is possible at present. The rather limited evidence from the earliest deposits suggests that oxidised and reduced coarse wares could be accompanied by white wares from the beginning of the sequence. The traditional dating of Oxfordshire white wares would support a date *c.* AD 100.

The terminal date of production at Lower Farm is as problematical as that of the commencement. The coins include unstratified aes of the House of Valentinian and issues of the House of Constantine from upper layers in Areas 1 and 2. A clipped siliqua, which is most unlikely to date before the last decade of the 4th century, came from layer 107, a stratified deposit at the top of the Area 1 sequence and containing pottery dating principally to the later 3rd century. The whole of the Area 1 sequence produced very little material which need have been of 4th century date, indicating only small scale production at that time. The late coin, if not intrusive, suggests continued activity which involved redeposition of essentially late 3rd-century strata. Elsewhere there is more ceramic evidence for 4th-century production, but even this appears to be on a reduced scale in comparison with the 3rd century.

The ceramic evidence relevant to the debate is found principally in fabric F51 and has already been mentioned briefly. In contrast with the situation in other fabrics (e.g. mortaria), in which a very heavy 3rd-century emphasis can be detected, there is a moderate representation of types which are dated exclusively after AD 300 or in some cases even later (on the standard chronology). The 4th-century types are C1 (1), C12 (1), C31 (1), C41 (4), C64 (2), C68 (13), C71 (2), C81 (24) and C110 (1), totalling 6.79 EVEs, though for the most common of these, C81, Young admits that a slightly earlier start date is possible.<sup>122</sup> Type C101, which can certainly be assigned to the early 4th century on the evidence from Lower Farm, should be added to this list. This type represents a further 3.17 EVEs. Types dated by Young after AD 325 are C50 (1), C70 (2), C75 (12) and C82 (body sherds only), totalling 0.99 EVEs. Vessels to which a date after *c.* AD 340/350 is assigned were C13 (1), C14 (1), C46 (6), C52 (6), C77 (1), C78 (body sherd only) and C84 (3), with rims which amounted to 2.45 EVEs. The single rim of C14, being a complete neck, comprised 1.00 EVE. This vessel came from a fill of well 317 (317/A/2) in which it was the only rim (out of a total of 11.60 EVEs of fabric F51) with a start date later than *c.* AD 300 (apart from a beaker of C102). While a date after AD 300 seems certain for this group there is no need for it to be as late as AD 350 and an earlier date for C14 seems likely. This would considerably reduce the later 4th century component of F51 vessels.

The case could be argued for re-dating most of the other Lower Farm examples of types which Young places after AD 340/350. If C14 is earlier, why not C13, of which it is described as a variant? C46 is defined as a type separate from C45 principally on the basis of its unusually large bead rim. In production site material, exact uniformity of rim size within a given type is unlikely to be found, and the existence of a grey area of definition between C45 and C46 is to be expected, particularly when no absolute values for defining the cutoff point are given.<sup>123</sup> The Lower Farm examples assigned to C46 all seemed to fall well within the range of bead size indicated by Young's illustrated examples. One of the six vessels assigned to this type was from an unstratified context, two were from the upper fill of the well 317 (for which a 4th century date is certain, but how late in the 4th-century is questionable), one was from a deposit dated tentatively to the early 4th century and two were from layer 108, a deposit perhaps of 4th-century date but containing a pottery assemblage almost entirely consistent with the later 3rd century (i.e. with multiple examples of M17, M18 and C45). It seems perverse to assign this context to a date after *c.* AD 340 on the basis of two small rims of C46. It is suggested therefore that examples of C46 were being made at Lower Farm (some perhaps unintentionally) by the early 4th century at the latest. Types C52 and C77 are assigned by Young to the mid-late 4th century on the basis that they have painted decoration, though he admits that the use of white paint on colour-coated ware started in some cases in the late 3rd century.<sup>124</sup> It is hard to see why the painted (C77) form of C75 should not have occurred from the inception of the latter, and it is particularly

<sup>122</sup> Y, 166.

<sup>123</sup> For example Y, 159, types C45.3 and C46.3.

<sup>124</sup> Y, 133.

hard to see why the makers of C51 waited for a century before experimenting with the application of paint to its flange. The case for colour-coated production at Lower Farm after c. AD 350 is very thin indeed if it is accepted that these examples (and they are not particularly numerous in total) could be dated a little earlier than the current framework. That the types in question should still generally be dated to the 4th century is not in dispute, however.

The vessels in F51 for which a 4th-century date seems certain therefore amount to 13.39 EVEs, 18% of the total EVEs in this fabric. Unfortunately the proportion of examples of the types with a wider date range which will have been of 4th-century rather than earlier date is very difficult to estimate, so the significance of the above figure is unclear. If the parallel of white ware mortaria is valid, however, specific later 3rd-century types (M17, M18, M20 and M21) were twice as common as the possible 4th-century ones (and this assumes that all examples of type M22 were of 4th-century rather than earlier date, though it is almost certain that at least some would have been produced in the 3rd century). On this basis, therefore, about a quarter of the F51 vessels with a relatively wide date range (AD 240–400 or 270–400) may have been of 4th-century date. This figure is very speculative, however, and assumes that white ware mortarium and colour-coated production were always exactly parallel in volume.

Whatever the precise figures, it seems that the total output of fine wares (and certainly of white ware mortaria) was rather less in the 4th century than in the 3rd. The longevity of production into the 4th century remains to be determined. Two principal interpretations are possible. One is that production extended throughout the 4th century but was at a low level after perhaps the first quarter of the century. Alternatively, production in the first half of the 4th century was at a comparable level to that in the later 3rd but had declined radically or ceased altogether shortly after the middle of the century, thus accounting for the low representation of specifically later 4th-century types. This scenario is preferred here, though on present evidence either is possible.

#### *Date range of individual fabrics*

When pottery manufacture commenced at Lower Farm (perhaps about AD 100), products comprised most of the main oxidised and reduced coarse wares and probably also white ware (fabrics O11, O21, R10, R20, R30 and W12). Fabrics F25 and F35 are likely to have been in production in the first half of the 2nd century, but this production was probably small scale and may have been very short-lived. In the 2nd half of the 2nd century white ware mortarium, white-slipped flagon and colour-coated beaker fabrics (M22, Q21 and F59) were added to the repertoire. F59 presumably did not outlast the 2nd century but the other two grew steadily in importance.

The introduction of the main colour-coated fabric F51 presumably occurred in the middle of the 3rd century, in line with its appearance elsewhere in the industry, but this is not proven. Some of the earliest instances of this fabric are in forms such as C45 to which Young assigns a commencement date of c. AD 270.<sup>125</sup> If this is correct (the date may be open to question) it would suggest that later Roman fine ware production at Lower Farm did not begin as soon as the fabric was developed elsewhere in the industry. The introduction of the colour-coated fabric (F51 and M41) was the last major development in fabrics at Lower Farm. Parchment ware (W11) and burnt white ware (W23) were very minor elements in the late Roman production, regardless of whether they were introduced simultaneously.

It is uncertain how many of the principal fabrics were still being produced at the end of the industry. There were very few oxidised and reduced coarse ware vessels of types dated solely to the 4th century,<sup>126</sup> which may indicate a decline in coarse ware production by this time. There were, however, plenty of examples of types with a date range which extended through the 4th century from the 3rd or earlier. On the other hand there were only two white ware types (apart from W33, for which see above) whose date range extended into the 4th century at all. These were W28 and W73, with a single example of each. The W28 vessel came from a well context (317/B/1) which while certainly of 4th-century date contained principally 3rd-century material. At latest this vessel is perhaps of early 4th-century date and could equally belong to the late 3rd. Present evidence suggests that at Lower Farm white ware production barely, if at all, outlived the 3rd century. It may therefore be presumed to have ceased before the demise of the site as a whole, though white ware mortarium production probably continued to the end.

#### *The date range of types within individual fabrics*

The dating evidence for many of the vessel types produced at Lower Farm is not adequate to establish a precise range. The majority of examples where this is possible, or where the Lower Farm evidence can be used to refine the established framework of the industry, have already been referred to in the immediately preceding discussion

<sup>125</sup> Y, 158.

<sup>126</sup> O11 (2), O14 (1), R16 (1) and R72 (1) were the only examples and an exclusively 4th-century date for some of these may be regarded as questionable.

and in the section of the report dealing with individual fabrics. Dates which are at variance with those suggested by Young are on the basis of the Lower Farm evidence alone and may be of limited application across the industry as a whole.

A summary of the proposed modifications to the established dating framework for colour-coated wares (fabric F51) is given below.

- C13. ?early 4th century (and later?)
- C14. ?early 4th century (and later?)
- C40. probably first half of 4th century (and later?). Three of the five examples occur in upper fills of well 317.
- C45. starting *c.* AD 240–250 rather than AD 270.
- C46. starting *c.* AD 300 or possibly a little earlier?
- C52. ?early 4th century and later.
- C77. ?starting *c.* AD 325 as C75.
- C101. early 4th century (and later?)
- C102. early–mid 4th century and later. This type is found in well 317 below the uppermost fill.

### *Principal deposits*

The relative lack of long stratified sequences at Lower Farm has already been referred to. Nevertheless there are several important groups of material, most of which are chronologically significant. These are treated in (approximate) chronological order.

311. This is one of the earliest stratified dump deposits. Most of these deposits are very mixed, and 311 is one of very few which appears to be discrete and homogeneous. The group consisted of 594 sherds, weighing 9.891 kg and totalling 18.83 EVEs. It was dominated by reduced and oxidised coarse wares. The forms represented included R12 (3), R21, R23, R24 (2), R34, R38 (3), R43 (2), R51, R52 (2), R65 and R76, and O10, O14, O41 (6), O43 (3) and O45. An M3 mortarium was also present, along with white wares (W7, W37, W53 and W54) and beakers of fabric F59. The balance of the evidence suggests that the group dates to the Antonine period. The only types which on the accepted chronology would suggest a later date are O14 and O43. Young's dating of O14 rests on an inexact parallel from Shakenoak (see No. 233 below) and it is much more likely that the production of O43 would overlap with that of the samian ware prototype rather than follow much later. Finally, the presence of F59 and the complete absence of late mortaria and fine wares is considered conclusive evidence of a late 2nd-century date.

Vessels from this group which appear below in the catalogue of illustrated pieces are Nos. 9, 10 and 14 (fabric F59), No. 119 (fabric M22), Nos. 186, 198, 200 and 201 (fabric W12), Nos. 227, 228, 233, 237, 242, 243, 247, 248, 249 and 253 (fabric O11), No. 267 (fabric O21), Nos. 271, 272, 273, 279, 282, 283, 301, 302, 307, 315, 318 and 334 (fabric R10) and Nos. 347, 353, 357, 361 and 364 (fabric R30).

138. A ditch group of 226 sherds, weighing 2.023 kg and totalling 2.66 EVEs. This contains principally reduced coarse wares, but oxidised coarse wares, white wares (both W12 and W22) and fabric Q21 occur, including a small rim sherd of type WC1 in this last fabric. The only reduced wares assignable to specific types were R38, R55 and R60. A date in the 2nd century rather than later seems likely.

Illustrated vessels from this group are Nos. 239 and 258 (fabric O11), Nos. 275, 306 and 327 (fabric R10) and No. 352 (fabric R30).

137. A ditch which cuts 138. This contained 559 sherds (many very small), weighing 3.891 kg and totalling 6.23 EVEs. The principal contents were again reduced wares, including types R12, R15, R31 (2), R34, R35, R43 (2) and R48. This last vessel (No. 322 below) is really a hybrid of R48 and R70, so although R48 is dated to the 3rd–4th centuries a 2nd-century date for the present example is quite possible, in line with the other types. Oxidised coarse wares and white wares and white mortaria (body sherds) were also present. The oxidised types included O18, O29, O34 and O41. In view of the dates both of the black-burnished ware prototype and the reduced ware parallel (R41, dated AD 80–400) there seems to be no justification for an exclusively late 3rd–4th century date for O29. Fabric Q21 was well-represented, with another rim of type WC1. Small sherds of F51 and M31 weighing 22 g also occurred. It is assumed that these were intrusive in the top of the feature fill, for which a date in the later 2nd century seems likely. If these sherds were not intrusive the dates of R48 and O29 do not have to be extended back into the 2nd century. In this case, however, many of the vessels in the group which are datable to the 2nd century would have to be regarded as residual. The view that the F51 sherd are intrusive is preferred here.

Illustrated vessels from this group are Nos. 236, 244 and 259 (fabric O11), No. 268 (fabric O21) and Nos. 293, 294, 317 and 322 (fabric R10).

317. The well produced 2661 sherds weighing 54,909 kg and totalling 71.53 EVEs, i.e. over 25% of the pottery from the site (except as numbers of sherds). Unfortunately the well could not be completely excavated. Pottery derives only from secondary fills, which must postdate the use of the well. This presents some problems of interpretation since there are at least two subtly different potential mechanisms whereby the upper fills accumulated. Firstly, the material may represent successive deposition events in which contemporary kiln-waste was used. Secondly, however, the infilling process may have been a single operation in which already dumped material derived from adjacent deposits was then redeposited. The first scenario would produce a meaningful sequence of material in chronological order; the second could produce a sequence of mixed deposits, an inverted sequence, or one which by chance resembled gradual infilling. On present evidence it is difficult to determine the precise infill mechanism, particularly in the absence of information about the lower fills. All the fills were characterised by a high proportion of colour-coated wares (c. 50%). White wares and white ware mortaria were generally poorly represented. The character of the groups tends to suggest that they may have been somewhat mixed, though the vast majority of the material is probably of late 3rd and early 4th-century date, with only a tiny number of sherds (always in the topmost fill) which may have been later (e.g. vessels with painted or stamped decoration). Apart from these few sherds there is little which would suggest any sort of chronological development in the sequence of fills. The lowest sampled fills (317/A/4 and 317/A/3) may perhaps be of late 3rd-century date (at the earliest). The remainder of the material from the well is treated as an early 4th-century group with a very few sherds in 317/A/1, 317/B/1 and 317/C/1 which may be a little later.

Vessels illustrated from fills other than the topmost of each excavated segment are as follows. SF2, SF14, SF18, SF20, 24, 27, 29-31, 38, 43, 48, 49, 51, 64, 67, 70, 73, 74, 78, 79, 81, 85, 87-90, 93, 97, 107-111, 115 and 116 (fabric F51), Nos. 141 and 155 (fabric M22), Nos. 161, 167, 173 and 174 (fabric M31), No. 205 (fabric W22), Nos. 214, 217 and 218 (fabric Q21), Nos. 224, 234 and 261 (fabric O11), Nos. 274 and 277 (fabric R10) and Nos. 354 and 355 (fabric R30).

Vessels from the topmost fill of the well are No. 6 (fabric F35), SF3, SF6, SF15-17, 33, 35-37, 41, 44, 45, 47, 55, 57-59, 61-63, 65, 68, 69, 71, 76, 77, 82-84, 86, 91, 92, 98, 99, 105, 106, 112, 113 and 117 (fabric F51), Nos. 122, 134, 144, 148 and 153 (fabric M22), Nos. 160, 162 and 166 (fabric M31), Nos. 170-172 and 175-177 (fabric M41), No. 182 (fabric W11), Nos. 187 and 202 (fabric W12), Nos. 219, 221 and 223 (fabric Q21), Nos. 226 and 240 (fabric O11), No. 344 (fabric R20) and SR2, 351, 366 and 368 (fabric R30).

329. This context represented material collected in the pot dump area during insertion of the water pipes. It contained 985 sherds. Their character makes it clear that many of them were derived from homogeneous stratified deposits. These probably included 2nd century deposits analogous to context 311. A significant number of sherds of F59 occurred in the group.

Illustrated vessels are Nos. 7-9, 14 and 16-20 (fabric F59), SF22, 26, 52 and 95 (fabric F51), Nos. 146 and 150 (fabric M22), Nos. 158, 159, 165 and 168 (fabric M31), Nos. 178-181 (fabric M41), Nos. 211, 212, 216 and 220 (fabric Q21), No. 251 (fabric O11), Nos. 276, 278, 280, 281, 284, 286, 287, 291, 295, 297-300, 304, 305, 309, 312, 319-321, 340 and 342 (fabric R10) and Nos. 356, 359, 360, 363 and 367 (fabric R30).

## GENERAL DISCUSSION

### *Fabrics and chronology*

The Roman pottery from Lower Farm probably represents a minute proportion of the total material produced at the site in the period between c. AD 100 and perhaps the mid 4th century or slightly later. Geophysical survey indicates the existence of at least 15 kilns, though of course there is no chronological dimension to the survey data.<sup>127</sup> The size of the pottery dump suggests that it was the principal place of deposition for rejects from most if not all of the production site. In this case the sample, though very small, may stand a better chance of being moderately representative of the production of the site as a whole, though there is a distinct chance that minor and in particular short-lived products may escape detection since their dumping would have been very localised, as in the case of context 311.

All the major elements of Oxfordshire pottery production were represented at Lower Farm, although some white wares (especially parchment ware, fabric W11), were of minor importance. The character of the different fabrics is quite homogeneous across the range and through time, except for

<sup>127</sup> Fourteen kilns can be assigned to the late 3rd and 4th-century production at the Churchill Hospital.

those (relatively few) products in which very coarse tempering was deliberately employed. The exact similarity of quartz inclusion sizes in finer and coarser white and oxidised wares, for example, is noteworthy (see descriptions of fabrics W12 and W22, O11 and O21 above). Also notable is the relative lack of mica in some of the fabrics, particularly the colour-coated fabric F51, which is usually characteristically micaceous.<sup>128</sup> Not all the sherds of F51 from Lower Farm were mica-free, however. Since sherds are unlikely to have come from other sites within the industry, it may suggest that a variety of clay sources was being exploited by the Lower Farm potters, or that there was considerable variation in the mica content of clay derived from a single major source.

Lower Farm is so far unique amongst the known Oxfordshire production sites in having evidence for the manufacture of fine wares in the 2nd century AD. Of the three elements of this manufacture two, the lead glazed and mica dusted fabrics (F25 and F35), seem to have been produced on a small scale. This judgement is based not only on their rarity in the excavated assemblage which, being a very small sample (see introduction above), may not reflect the true picture, but also on the relative absence of confidently identified examples of these fabrics from sites within the region. This absence is not total, however. A sherd of fabric F25 from Littlemore has already been discussed. Regrettably, none of 'the green glazed ware, many fragments of which were found' from Headington Wick has survived, so the significance of Jewitt's observation<sup>129</sup> cannot be assessed. It is not certain that these sherds were Roman, but if they were it may indicate that this fabric was produced at more than one site within the Oxfordshire industry.

The mica dusted fabric F35 is found a little more widely. A mica dusted beaker with an angled everted rim and impressed circle decoration from the Vineyard excavations at Abingdon<sup>130</sup> is close enough in fabric to F35 to be attributable to Lower Farm. More significantly, three vessels from the Abbey Well at Dorchester-on-Thames,<sup>131</sup> re-examined in the Ashmolean Museum, are of a consistent fabric which is very similar to F35. While a Lower Farm source for these vessels is not certain, Frere thought that they were the only ones in the group apart from Samian not produced at Dorchester.<sup>132</sup> The forms of the Dorchester vessels are of interest. The beaker (109) is comparable to the vessel from Abingdon. The dish (141) is comparable to the reduced Oxfordshire form R49, though it is not paralleled in oxidised wares. The tall vessel (108) suggests an extremely elongated bag-shaped beaker in form, but is certainly an oddity. The base of a further vessel, from 'Dorchester 1962 drainage, Pit 5'<sup>133</sup> is in the same fabric.

The dating of these early fine ware fabrics rests partly on parallels from outside the region, which suggest that these exotic fine wares should be seen in the context of comparable production assigned elsewhere to the early 2nd century.<sup>134</sup> It may be noted that the form of the Abingdon mica dusted vessel mentioned above is close to a London form (22), and the impressed circle decoration may reflect the use of raised boss decoration on the related form 20.<sup>135</sup> The Abbey Well material from Dorchester-on-Thames, dated to about the end of the 1st century AD, is the best indicator from the region. The local major market centre is precisely the place where one would expect to see the early fine wares appearing. More extensive research would be required to demonstrate how common these products really were at places like Dorchester, Abingdon and perhaps Alchester.

The other 2nd-century fine ware, F59, is a little different from F25 and F35. It was in production later, probably during the second half of the 2nd century, and on present evidence was more common. However, like the earlier fine wares it has been difficult to identify F59 at settlement sites away from Lower Farm. Again Dorchester-on-Thames should have been a major recipient, if not the only

<sup>128</sup> Y, 123.

<sup>129</sup> L. Jewitt, 'On Roman Remains, Recently Discovered at Headington, near Oxford', *Jnl. British Archaeological Association*, 6 (1851), 65.

<sup>130</sup> Site 2, context 4540, excavated in 1992.

<sup>131</sup> S.S. Frere, 'Excavations at Dorchester-on-Thames, 1963', *Archaeological Journal*, 141 (1984), 166-9, nos. 108, 109 and 141.

<sup>132</sup> *Ibid.*, 167.

<sup>133</sup> In the Ashmolean Museum, perhaps the same feature as that published by Frere, *ibid.*, 129-30.

<sup>134</sup> Arthur and Marsh, *op. cit.* note 70, 1-2.

<sup>135</sup> Marsh, *op. cit.* note 78, 149-55.

important one, but evidence is lacking. The Abingdon Vineyard site sees a change in the character of the occupation at this time, so the relative absence of F59 there may be less significant, though there is one probable vessel.<sup>136</sup> It should be noted that the Abingdon material has only been examined very cursorily, before Lower Farm was excavated; re-examination of the assemblage in the light of the Lower Farm data may alter the current perception of the significance of the various 2nd-century fine ware fabrics.

On present evidence F59 was used almost exclusively for roughcast beakers, but the Abingdon sherd suggests that the use of barbotine decoration may have been more important than would have been inferred from Lower Farm alone, where the sole use of barbotine is on an exceptionally finely decorated but presumably one-off vessel (No. 7). Roughcast decoration has not hitherto been noted in the Oxfordshire industry but it occurs quite commonly on oxidised coarse ware vessels within the region. Examples are known at Dorchester-on-Thames<sup>137</sup> and Frilford.<sup>138</sup> The fabrics of these vessels are consistent with local production.

At Lower Farm roughcast decoration occurred on oxidised and reduced coarse wares as well as on F59. It is possible that some of these instances were in fact of F59 from which all the colour-coat has been eroded, but it would be difficult to explain all the examples in this way. Small-scale roughcast beaker production in coarse wares might have occurred in parallel with the colour-coated vessels. There is a hint that this might have been the case at Headington Wick. Jewitt<sup>139</sup> illustrates a roughcast beaker and says that 'cups of the form shown here . . . some of red and others of chocolate colour' occurred. It is unclear whether these are domestic vessels in use on the site or actually made there. If the former, they could have originated outside the region, but a more local source is also possible. The 'chocolate colour' suggests that some of these vessels were colour-coated.

Parallel coarse roughcast and fine ware beaker production can also be seen at Mancetter in North Warwickshire.<sup>140</sup> The analogy with Mancetter can be pursued because there, as at Lower Farm, colour-coated (but not roughcast) beakers were produced on a relatively small scale in the Antonine period, but at neither site did this production lead to anything significant. At Mancetter it marked a short lived involvement with fine wares which was only resumed (equally unsuccessfully) briefly in the 4th century by an immigrant from the Oxfordshire industry, who worked at nearby Hartshill.<sup>141</sup> At Lower Farm, despite close similarities of fabric, slip and firing between F59 and the later fine ware, there is no evidence to suggest a direct connection between the two. Indeed, a chronological gap of some 50 years is indicated on present evidence.

The manufacture of colour-coated roughcast beakers at Lower Farm can be seen as part of a wider pattern in the same way as the earlier fine ware production. Comparable vessels were produced at a variety of continental sites as well as in Britain.<sup>142</sup> The British sources include Colchester, where it is suggested that all the vessels fall within the range c. AD 140–200,<sup>143</sup> and the Nene Valley, though the scale of roughcast beaker production there is still very uncertain. The difference between these centres and the Oxfordshire industry, however, was that they developed or were already established as major fine ware producers, whereas Oxfordshire fine ware production did not become firmly established until about the mid 3rd century.

There is some evidence to suggest that white colour-coated ware (fabric Q21, Young WC) first appeared at Lower Farm at about the same time as F59. This is a little earlier than has been suggested hitherto, though Young's uncertainty about the start date for this fabric clearly results from a lack of evidence.<sup>144</sup> Q21 (with the equivalent mortarium fabric M31) formed a significant proportion of the

<sup>136</sup> A cornice rim beaker with a fragment of barbotine decoration, from the 1989 excavations, context 855.

<sup>137</sup> S.S. Frere, 'Excavations at Dorchester-on-Thames, 1962', *Archaeological Journal*, 119 (1962), 138 and 141, nos. 149 and 154.

<sup>138</sup> R.A.H. Farrar, 'Coarse ware', in J.S.P. Bradford and R.G. Goodchild, 'Excavations at Frilford, Berks, 1937–8', *Oxoniensia*, iv (1939), 42–43, no. 3 and 'three similar vessels'.

<sup>139</sup> Op. cit. note 129, 64.

<sup>140</sup> Unpublished excavations by K.F. Hartley.

<sup>141</sup> J. Bird and C.J. Young, 'Migrant Potters – the Oxford Connection', in A.C. and A.S. Anderson (eds.), *Roman Pottery Research in Britain and North-West Europe*, BAR (International Series) 123 (1981), 305–7.

<sup>142</sup> A.C. Anderson, *A Guide to Roman Fine Wares*, VORDA research series 1 (1980), but see R.P. Symonds, 'The Problems of Roughcast Beakers, and Related Colour-coated Wares', *Jnl. Roman Pottery Studies*, iii, 1–17.

<sup>143</sup> Symonds, op. cit. note 142, 8–10.

<sup>144</sup> Y, 120.



Lower Farm output, particularly of mortaria, jars and flagons. The flagons form the earliest component in Q21 production, and there is no evidence from Lower Farm to suggest that any of the other types in this fabric should be dated earlier than they are by Young. The Lower Farm evidence supports the suggestion that white-slipped wares are a speciality of the southern production centres in the industry, i.e. those lying furthest away from a source of white firing clay. It is notable that apart from the Dorchester-on-Thames kilns Lower Farm is the closest of any of the Oxfordshire production sites to Baldon (which lies *c.* 4 km SE), where a particular concentration of this fabric has been recorded.<sup>145</sup>

Mortarium production was another new element introduced at Lower Farm in the second half of the 2nd century. It is tempting to see this development as contemporary with the introduction of F59 and Q21, but this goes beyond the evidence. Once established, white ware mortaria were produced in small quantities up to about the middle of the 3rd century and then suddenly became a much greater part of the output. If the traditional dating of types M17 and M18 is accepted, two thirds of all white mortarium production at Lower Farm took place from *c.* AD 250–300. Thereafter mortarium output either continued at about the same level for another 20–30 years, with M22 as the only product, or it lasted into the second half of the century (as might be suggested by the possible presence of two examples of M23) but at a much reduced level. Present evidence does not allow a firm conclusion.

The mid 3rd century presumably also saw the introduction of red colour-coated wares (fabric F51 and mortarium fabric M41), though there is some doubt about the precise date. This is because the most common individual vessel type at Lower Farm, C45, is dated after *c.* AD 270 by Young rather than earlier.<sup>146</sup> There is no clear evidence from the site to suggest that C45 was a later addition to the F51 repertoire after its production had commenced. The possibilities are therefore that (a) F51 was not introduced at Lower Farm until *c.* AD 270, or (b) that the date of C45 should be pushed back closer to the middle of the 3rd century. Since all the evidence from Lower Farm already indicates a heavy emphasis on this period, the redating of the introduction of C45 to the mid 3rd century is preferred. It is perhaps to be expected that one of the most common Oxfordshire forms, derived directly from a samian ware prototype, should have been in production from a date nearer to that of the common currency of its predecessor.

An implicit assumption in the above discussion is that the introduction and expansion of production of both white mortaria and colour-coated wares was probably simultaneous and began at or very shortly after the introduction of these products in the industry as a whole. It should be emphasised that this is an assumption which cannot be verified (or disproved) on present evidence. Fourth-century developments in white and colour-coated wares cannot be traced in tandem, however, because of differences in the dating framework of the two products; i.e. there are significant mortarium types which are confined to the later 3rd century, whereas this is not the case in colour-coated wares. There is thus no way of distinguishing between 3rd- and 4th-century examples of many vessel types in F51, and therefore it is not possible to demonstrate whether the development of fine ware production mirrors or diverges from that of the mortaria.

The development of the white-slipped wares, however, does seem to mirror that of the white mortaria, with a heavy emphasis on identifiable 3rd-century types. This may be because of a closer correlation between the products in fabrics M22 and M31/Q21, but it may also support the idea that all the main components of the later Roman production at Lower Farm evolved in the same way and declined together. It is unclear how the oxidised and reduced coarse wares fit into this framework. They occurred in some quantities even in the latest stratified deposits and may have continued in production as late as the other major components of the industry. There is nothing to suggest that they outlasted the fine wares; if, on the other hand, their production had ceased a little earlier this would be very difficult to detect from the available evidence.

It has been shown above that the proportion of F51 vessels of types dated exclusively to the 4th century is relatively small (*c.* 18%). If it is assumed that the bulk of production of the more long-lived types took place substantially within the 3rd century, rather than later, and if it is assumed that later types were produced at Lower Farm at the early end of their date range rather than later, then the

<sup>145</sup> Y, 117.

<sup>146</sup> Y, 158.

developmental sequence of fine ware production could be seen as being close to that for the other major components of the industry. This imposes strains on the evidence, but not ones which it cannot bear. In sum, the evidence for fine ware types which must date after *c.* AD 350 is very slight, and does not suggest significant production after that date.

One other chronological possibility, which would have implications for the dating of the later industry, remains to be considered. This is that the Lower Farm potters may have been conservative in some respects. There are two areas of enquiry, white ware mortaria and colour-coated wares. The preponderance of the 3rd-century mortarium types M17 and M18 has been referred to frequently, but always with the assumption that their production ceased *c.* AD 300; this date depends largely on the absence of M17 in phase 4b at the Churchill Hospital.<sup>147</sup> The level of production at Lower Farm would have been much more consistent in the later Roman period if M17 and M18 had continued in production beyond AD 300. This must be considered a serious possibility, but it is not one which can be conclusively demonstrated on the Lower Farm evidence.

Another aspect of this problem, which is relevant to the question of the terminal date of production at Lower Farm, concerns the introduction of 'late' trends, the vessel types and decorative techniques discussed above. Were such types and techniques in universal use across the industry, or could their relative absence at Lower Farm indicate a branch of the industry which had no interest in developing its repertoire? If this was the case it is possible that the site remained in production later than has been suggested above, but with a conservative range of products which did not evolve significantly after the early 4th century. Neither of these scenarios seems likely on current evidence, though they would be difficult to prove either way. However, they should be considered as a counterbalance to the tendency of this study to move dates earlier rather than later.

The numismatic evidence is relevant to these issues because it is partly in contrast with the pottery. Ten Roman coins were found, of which seven (one a tiny fragment) were effectively unstratified. Nevertheless the overall character of the coin assemblage can be usefully compared with the ceramic evidence, and the identifiable stratified coins are helpful. Half of the ten coins were of the House of Valentinian, and one of these (reused) cannot have been lost before *c.* AD 390. At best, however, the pottery evidence only indicates very low level production in the second half of the 4th century. It does not seem possible to resolve this contradiction on present evidence, but there are several possible explanations.

Firstly, the dating of the pottery may have been misunderstood and late Roman pottery production occurred at Lower Farm on a reasonable scale; this seems unlikely for reasons discussed above. Secondly, it may be that the excavated sample is less representative than was thought, and that late Roman production did occur at Lower Farm with its waste being dumped in parts of the site which were not examined. If this was the case, however, it is difficult to see why coins should have been dropped but not other contemporary material, including pottery. Thirdly, late Roman activity at the site may have been of a different character from earlier (e.g. perhaps purely domestic/agricultural) though again some domestic pottery of appropriate date might have been expected in association with the coins. Fourthly, the later coins could have been introduced from an adjacent area by post-Roman ploughing.

On balance, the third possibility is preferred here, but the case is far from conclusive. A low level of later 4th-century domestic ceramics, most of which would have been of Oxfordshire manufacture, would have been very difficult to detect amongst the mass of other material. The occurrence of the latest dated coin in a deposit (107) which contained otherwise almost exclusively late 3rd-century material may support this. It is notable that the sherds from this and the immediately overlying layers produced 17% of the total pottery from the site but well over 30% of the non-local pottery, with significant representations of black-burnished, shell tempered and Nene Valley colour-coated wares. Such material presumably relates to a domestic component in the overall Lower Farm assemblage, though how much of it indicates the potential existence of such a component after *c.* AD 350 is much less clear. What does seem certain, however, is that this part of the site was not being used for the dumping of production waste after the early years of the 4th century. Subsequent activity at this point involved the partial disturbance and redeposition of material dumped some time previously.

<sup>147</sup> X, 72.

*Vessel types*

The 2nd-century range of products at Lower Farm shows relatively little evidence of specialisation in terms of vessel types, and is therefore not greatly dissimilar to settlement site assemblages in terms of the relative proportions of major vessel types. From the later 2nd century onwards, however, this situation began to change, with the introduction of mortaria into the range and a probable increase in the number of flagons produced. It is probably not until the mid 3rd century, however, that the character of the vessel population changed to the extent that the Lower Farm repertoire, like that of many kiln sites, ceased to be a 'normal' one in terms of the usual proportions of vessel types found on settlement sites. This was a result of two factors: the heavy (though by no means exclusive) concentration on fine ware production; and the overlapping specialisation in mortaria. The latter, at 14.2% of the total output was far from being a dominant specialisation, however, and two of the three components of the mortarium ware group were sidelines (albeit important ones) in terms of the overall output of the fabrics of which they were part (F51 and Q21). Only in white wares were mortaria more important than other products in the same range of fabrics.

Another result of the concentration on fine ware production was the relatively high representation of flagons/jugs, beakers and bowls, all types for which fine ware fabrics were favoured. None of these types occurred exclusively in fine wares, however. The contribution of oxidised coarse wares to flagon output, for example, is noteworthy.<sup>148</sup> Equally some fabrics were not always used for the products which might have been most readily expected. For example, the most important vessel class in the white-slipped fabric Q21 was not flagons but jars, which were twice as common, despite apparently being in production for a shorter period of time. These vessels were even slightly more numerous than the mortaria in the corresponding fabric M31. Despite the importance of fine wares, beaker production at Lower Farm remained at a relatively modest level, amounting to just over 10% of the output of fabric F51. It is possible, however, that the conventional beaker types were supplemented by what seems to have been a Lower Farm specialisation, the miniature jar type C101, hitherto only known to have been made at Sandford.<sup>149</sup> This amounted to a further 4.3% of F51 vessel types at Lower Farm.

The greatest part of F51 production was devoted to bowls, with a heavy concentration on type C45. The latter accounted for 30% of all F51 vessels and was perhaps one of the earliest vessels made in F51 at Lower Farm. The case for dating it before AD 270 has been discussed above. C45, like many of the common colour-coated types at Lower Farm, derived from a samian prototype. Such vessels (bowls and the cups C88 and C110) comprised just over half of all EVEs in fabric F51. In the absence of data from other production sites it is unclear if this is an average or abnormal figure. Echoes of samian types were also seen in the coarse wares, especially in fabric O11, where the occurrence of such forms seemed to be unusually high, though this was largely a subjective judgement. Forms included the most common of the oxidised vessel types to which a Young number could be assigned, O41, which imitates Drag. 18/31, as well as O43 (Drag. 33), O44 (Drag. 36), O45 (Drag. 37) and O48 (Drag. 38). These types are quite uncommon in the industry, so their appearance together at Lower Farm is noteworthy.

Other characteristics of note in this discussion include the relatively high incidence of potter's stamps. There were seven examples of such stamps on oxidised wares.<sup>150</sup> They were more common on colour-coated wares, with 19 examples. The relatively high (by Oxfordshire standards) degree of literacy attested by some of these stamps (with the use of the element FECIT on three examples) may indicate a closer interest in the samian prototypes than was perhaps shown at some of the other production sites within the Oxfordshire industry.

Such a point would be very difficult to demonstrate without very detailed examination of other production site assemblages within the Oxfordshire industry. Such work falls outside the scope of this report, though comparisons particularly with the closest sites such as Sandford (with a very similar range of mortarium types) and Baldon (for colour-coated and white-slipped wares) would be a fruitful

<sup>148</sup> Flagons amounted to 25% of all vessels in fabric O11.

<sup>149</sup> Y, 174.

<sup>150</sup> Unfortunately Young does not record numbers of such stamps which he refers to as occurring on O41; Y, 188.

area of research. The occurrence of name stamps on colour-coated wares at Sandford suggests another area of similarity with Lower Farm. Such stamps, notably absent from the most extensively investigated Oxfordshire production site at the Churchill Hospital, also occur at Allens Pit (Dorchester) and Cowley. A similarity in the range of mortarium types at Cowley and Lower Farm has already been noted, though some of the common 2nd and early 3rd-century types found at the former site were absent at Lower Farm. Groupings of sites may begin to emerge within the industry if such associations can be pursued.

#### CATALOGUE OF ILLUSTRATED SHERDS

The illustrated pottery is presented as a type series of the vessels within individual fabrics. The sequence of the fabrics follows that of the descriptive part of the text (above), with the exception that F59 is placed before F51 so that all the 2nd-century fine wares can be seen together. Where appropriate, the ordering of vessel types follows that of Young. Vessels which have not been assigned a Young number are placed within the various fabric/type series in what is hoped to be as logical a fashion as is possible. In each entry the illustration number is followed by the context number and the OAU recording system type (one or two letters). Young type numbers are given where possible, without further identification (for correalation of OAU type codes with Young numbers see the Appendix).

#### *Fabric F25*

1. Field walking square A11 (unstratified). Type E; small everted rim beaker.
2. Layer 112. Body sherd, perhaps from a beaker (type E), with rouletted decoration and areas of contrasting colour, caused by the localised use of an under-glaze slip.
3. Layer 106. Type HA; carinated bowl, probably imitating Drag. 30. Decoration of overlapping impressed rings. See also nos 176, 265 and 311.
4. Layer 112. Type JA; shallow dish, probably with footring, reminiscent of Drag. 18. Faintly rouletted overall.

#### *Fabric F35*

5. Layer 112. Type IB; bowl with large curving flange. Form as O40.
6. Well fill 317/B/1. Type HC; bowl reminiscent of Drag. 18/31.

#### *Fabric F59*

7. Layer 329. Type EC; bag-shaped beaker, with finely-formed cornice rim. Barbotine decoration of repeating stylised plant motifs. There is some variation in the form of the leaves at the top of the motif and of the dependent flowers or fruits. There are no obvious close parallels for this decoration on other Romano-British vessels.
8. Layer 329. Type E; beaker of uncertain form with sharply angled everted rim. No surviving decoration.
9. Layer 329. Type EC; (probably) bag-shaped beaker with roughcast decoration below the shoulder groove.
10. Layer 311. Type EC; bag-shaped beaker with roughcast decoration below the shoulder groove.
11. Layer 311. Type EC as No. 10.
12. Layer 302/A/4. Type EC; (probably) bag-shaped beaker. No surviving decoration.
13. Layer 302/A/4. Type EC as No. 10.
14. Layer 329. Type EC; (probably) bag-shaped beaker with slight groove on shoulder. No surviving decoration.
15. Layer 311. Type EC as no. 10.
16. Layer 329. Type EC; (probably) bag-shaped beaker with groove on shoulder and on upper body. Very poorly-preserved roughcast decoration.
17. Layer 329. Type EC; (probably) bag-shaped beaker base with overall roughcast decoration.

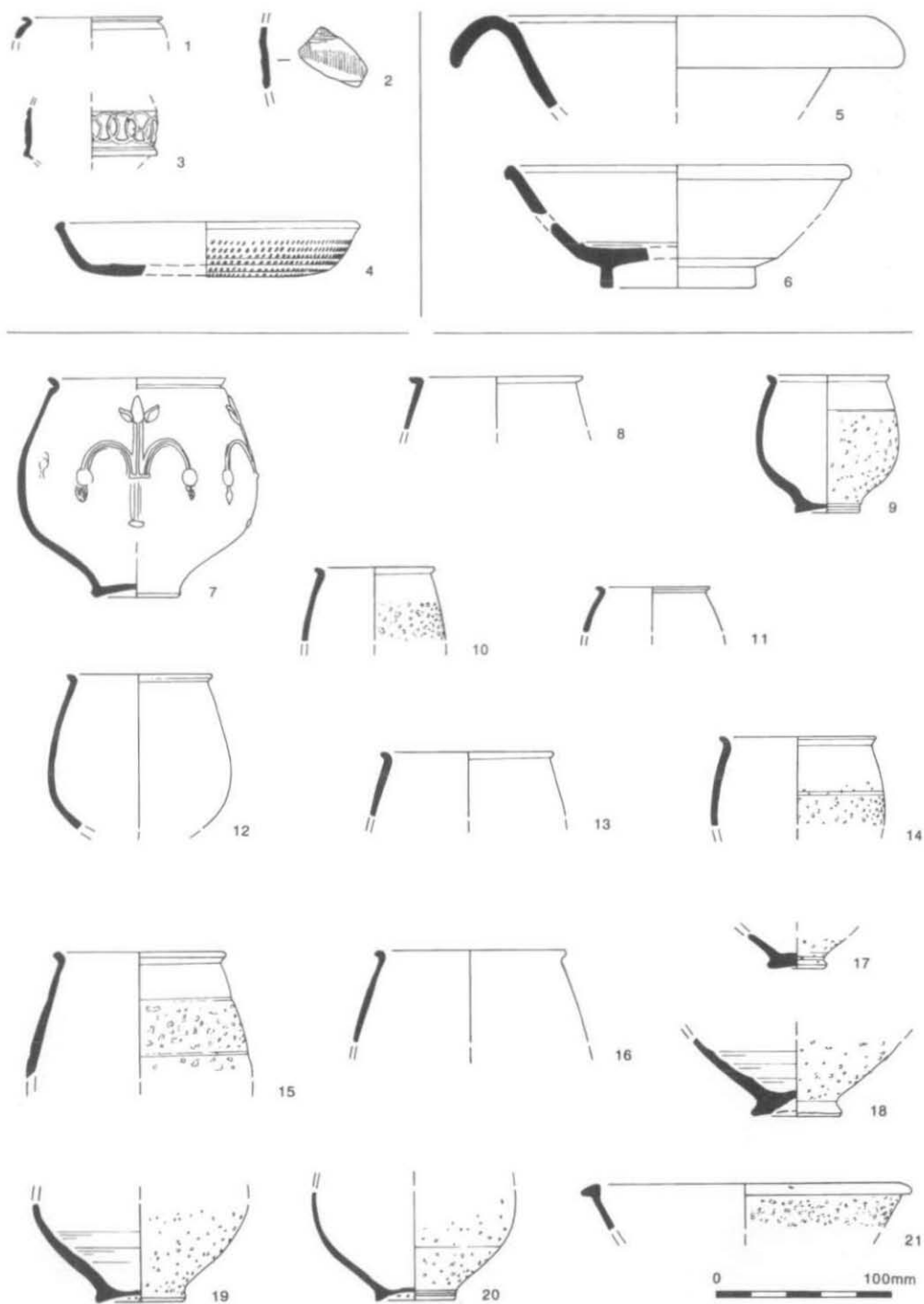


Fig. 25. Lower Farm, Nuneham Courtenay: vessels 1-21, early finewares, fabrics F25, F35 and F59; scale 1:4.

18. Layer 329. As No. 17.
19. Layer 329. As No. 17.
20. Layer 329. As No. 17.
21. Layer 302. Type IA; straight-sided bowl or dish. Very slight traces of possible colour-coat and remnants of roughcast decoration in white firing clay, contrasting with the oxidised body. The attribution of this vessel to fabric F59 is uncertain.

### *Fabric F51*

#### *'Name' Stamps*<sup>151</sup>

The name stamps from Lower Farm are remarkable in that nine are certainly or probably of Young's semi-literate group.<sup>152</sup> These include three stamps which can be assigned to Paternus or Paternianus. A FECIT suffix, not previously recorded in the industry, occurs on a further three different (but probably related) stamps. All the examples of semi-literate stamps are from different dies. In contrast, multiple examples were found of some other stamps. SF11-13 are probably all from the same die, and a fourth fragment also occurred. The two 'linear cell' stamps each occurred twice (SF14/15 and SF16/17).

SF1. Unstratified. Perhaps on type C45 (No. 72 below). Incomplete retrograde stamp of Paternus or Paternianus. The reading PATERNIA before the diagonal line with pellets is possible if it is assumed that the N, I and A were combined. This stamp is identical to one from Headington Wick.<sup>153</sup> A further stamp from Silchester<sup>154</sup> is so close (allowing for a certain roughness in the drawing) that it too may be from the same die. These stamps are very similar to, but not the same as, Young's no. 1 from Dorchester, Allen's Pit.<sup>155</sup> The differences are in the presence on the Lower Farm/Headington Wick example of a horizontal line in the N (the justification for the PATERNIA reading proposed above) and an oblique bar between the two pellets after the N. This line appears in Young's 1974 drawing of the stamp,<sup>156</sup> but not in the 1977 version.<sup>157</sup> Indeed it is not clear on which specific stamp Young's illustrations are based; the only example from Allen's Pit which could be relocated was significantly smaller than Young's versions (c. 26 mm long, cf 33 mm in the 1974 publication and 36 mm in 1977) and different in several details, particularly at the 'illiterate' end. Whatever these differences, however, the close relationship between the Lower Farm/Headington Wick stamp and Young's PATERN stamp is clear.

SF2. Well fill 317/A/3. Perhaps on type C45 (No. 70 below). Retrograde stamp of Paternus or Paternianus. The second half of the stamp is not very clearly impressed. The reading PATER is clear, as is an A in the second part, otherwise only diagonal lines are discernible before the rounded character at the end of the stamp. This may be an O, or a D or P, possibly mirroring the initial letter of the stamp.

SF3. Well fill 317/B/1. Perhaps on type C45. The stamp is worn and has been rocked in the process of making the impression across the raised central part of the base. Some of the detail is therefore uncertain, but the stamp appears to begin PA (retrograde). This suggests that it may be another stamp of the Paternus/Paternianus workshop.

SF4. Layer 103. Perhaps on type C45 (No. 66 below). Fragmentary stamp ending in FECIT. There is a pellet between the I and T, and a further mark or stroke after the stem of the T may have been intended as another separate pellet.

SF5. Pit fill 151. On type C45. Semi-literate retrograde stamp ending OFECIT. The F and E are ligatured together and there are pellets on both sides of the stem of the T, perhaps a stylistic link with SF4 above. The stamp begins with oblique lines and pellets in a manner similar to SF11-13 below.

<sup>151</sup> Stamped vessels occur in fine wares and oxidised and reduced coarse wares. In each case the stamps are numbered in a separate sequence with the appropriate prefix (i.e. F = fine ware) preceded by the letter S.

<sup>152</sup> Y, 128 and 176.

<sup>153</sup> Jewitt, *op. cit.* note 129, 66, no. 1.

<sup>154</sup> T. May, *The Pottery Found at Silchester* (1916), pl. lxxxi no. 12.

<sup>155</sup> Y, 176 and 178.

<sup>156</sup> Young, *op. cit.* note 81, 231 no. 5.

<sup>157</sup> Y, 178, no. 1.

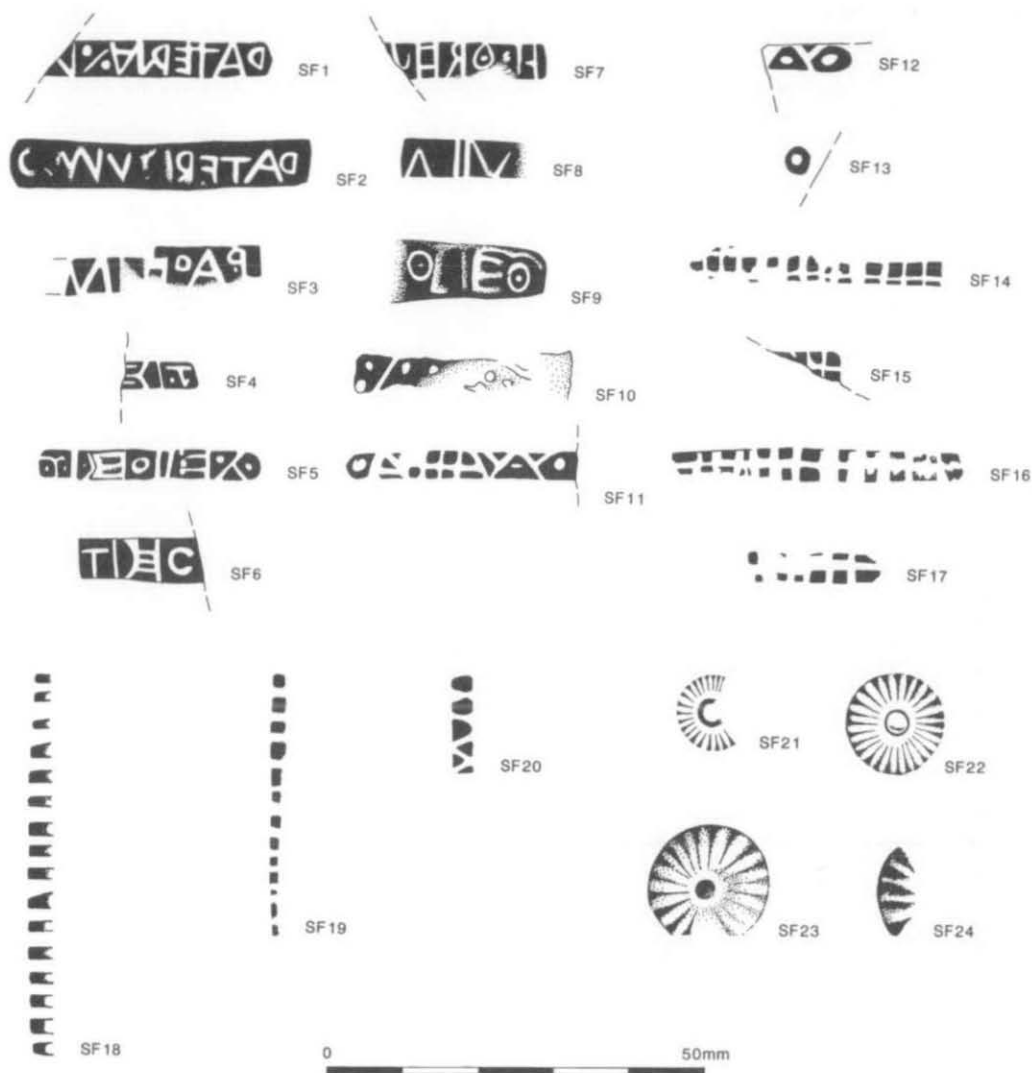


Fig. 26. Lower Farm, Nuneham Courtenay: SF1-SF24, name and decorative stamps on fabric F51; Scale 1:1.

SF6. Well fill 317/B/1. Perhaps on type C45. Fragmentary retrograde stamp ending in OFECIT (cf SF5 above). The F, E and C are ligatured together, and the preceding O is damaged. The letters are clearly cut, however.

SF7. Layer 106. Perhaps on type C45 (No. 71 below). The stamp is incomplete and worn, but is apparently retrograde. The letters OR can be distinguished in the centre.

SF8. Layer 301. Perhaps on type C45. The stamp is incomplete and very worn. Some of the detail is uncertain.

SF9. Layer 301/A/1. Perhaps on type C45. The stamp is incomplete and very worn. Some of the detail is uncertain.

SF10. Pit fill 312/A/1. On type C45 (No. 68 below). The stamp is very worn. The principal elements appear to be diagonal lines and pellets.

SF11. Layer 102 and joining fragment unstratified. Perhaps on type C45. The stamp has diagonal lines and pellets at each end of a short block of squarish cells divided by a central spine in the manner of Nos. 16 and 17 below. The closest parallel in Young is no. 20,<sup>158</sup> a fragmentary stamp from Wroxeter, which has diagonal lines and a pellet at the end as common characteristics, but it also has a border, which is not found on any of the Lower Farm stamps.

SF12. Trench 1 unstratified. Perhaps on type C45. Fragment almost certainly from the same die as SF11.

SF13. Layer 102. On type C45 (No. 60 below). Fragment almost certainly from the same die as SF11. Another, similar fragment from the same context was not drawn.

SF14. Well fill 317/A/2. On type C45 (No. 67 below). Linear stamp with central block of roughly square impressions, flanked by rows of smaller cells probably on each side, but one row barely survives.

SF15. Well fill 317/B/1. On type C45. Fragment almost certainly from the same die as SF14.

SF16. Well fill 317/B/1. Perhaps on type C45. Stamp of similar character to SF14, but with two rows of 'cells' of more equal depth each side of the central 'spine', though with greater variety of length.

SF17. Well fill 317/A/1. Perhaps on type C45 (No. 63 below). Fragment almost certainly from the same die as SF16. The diagonal indentation is probably a blemish in the surface of the vessel rather than on the die.

#### *'Decorative' stamps*

SF18. Well fill 317/A/2. On type C31 (No. 51 below). Vertical linear 'comb' stamp used between indentations.

SF19. Layer 302/B/2. On type C31 (No. 50 below). Vertical linear 'comb' stamp used between indentations. The character of SF18 and SF19 is very similar to that from Baldon.<sup>159</sup>

SF20. Well fill 317/A/2. On type C57 (No. 89 below). Short vertical linear stamp.

SF21. Layer 103. Possibly on type C84. Fine rosette stamp, used overlapping.

SF22. Layer 329. On type C78 (No. 95 below). Rosette stamp.

SF23. Layer 103. On type C84 (No. 101 below). Large rosette stamp.

SF24. Same vessel as SF23. Poorly defined demi-rosette stamp.

#### *Flagons/Jugs*

22. Ditch fill 303/A/1. Type C4.
23. Layer 103. Type C8.
24. Well fill 317/A/2. Type C8.
25. ?Layer 313. Type C8.
26. Layer 329. Type C8. Recorded as fabric OF. The concavity on the inside of the rim, seen in Nos. 24–26, seems to be a distinctive Lower Farm characteristic.
27. Well fill 317/A/2. Type C12.
28. Layer 106. Type C13.
29. Well fill 317/A/2. Type C14.
30. Well fill 317/A/3. Type BC; large flagon/jug or possibly a narrow mouthed jar.
31. Well fill 317/A/2. Type BA; small flagon/flask, cf e.g. C1, C8 etc.
32. Layer 108. Fragments of body of very large flagon or narrow mouthed jar. There is a cordon on the neck, but no other decoration.

#### *Jars*

33. Well fill 317/B/1. Type C16
34. Ditch fill 322. Type CD; medium mouthed jar. This vessel is close in rim form and size to those assigned to C101 (see below), but is slightly larger.

<sup>158</sup> Y, 177–8.

<sup>159</sup> Y, Fig. 39 no. 1.



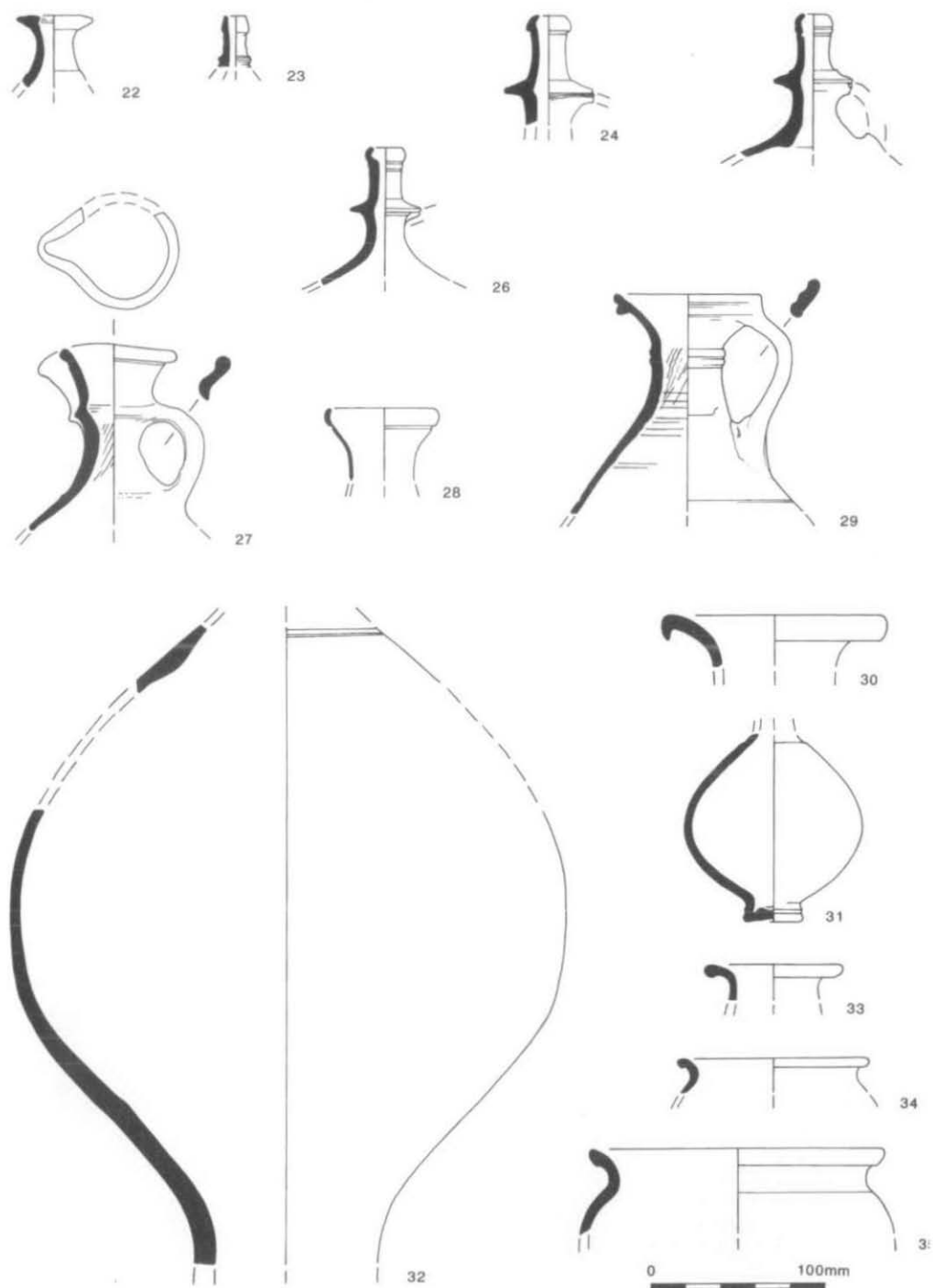


Fig. 27. Lower Farm, Nuneham Courtenay: vessels 22-35, fabric F51; scale 1:4.

35. Well fill 317/B/1. Type CD; medium mouthed jar. This vessel and No. 34 should perhaps be assigned to type C18 which, although described as a wide-mouthed type includes one clearly anomalous example (C18.2).<sup>160</sup> C18 has therefore been used as something of a 'catch-all' category here.
36. Well fill 317/A/1. Type C18.
37. Well fill 317/B/1. Type C18.
38. Well fill 317/A/4. Type C18.

#### *Beakers*

39. Layer 301/A/1. Type E; small beaker with expanded rim and very short neck. Rouletted decoration on the shoulder.
40. Layer 102. Type ?E; beaker with slightly thickened everted rim.
41. Well fill 317/B/1. Probably type C20.
42. Layer 108. Type C22. C22 is used here and below for vessels which have the general characteristics of types C23 etc but of which insufficient survives to allow attribution to the specific types.
43. Well fill 317/A/2. Type C22.
44. Well fill 317/B/1. Type E; uncertain beaker type, perhaps C22.
45. Well fill 317/B/1. Type E; uncertain beaker type with vertical neck and very fine hooked rim.
46. Layer 103. Type C22.
47. Well fill 317/A/1. Type E; beaker with long neck and sharply everted pointed rim. Perhaps a variant of C23.
48. Well fill 317/A/2. Type C23.
49. Well fills 317/A/1, 317/A/3 and 317/B/1. Type C25, with a maximum girth diameter of c. 210 mm. Parts of at least two large animals (?hounds) survive. This is the only certain example of this type from Lower Farm.
50. Layer 302/B/2. Type C31. Oval indentations with vertical comb stamps (stamp SF19 above) between them.
51. Well fill 317/A/2. Type C31. As No. 50 but with double stamp (stamp SF18 above) between indentations.
52. Layer 329. Type C31 variant, with both round/oval and narrow elongated indentations.
53. Layer 108. Type C31 variant, with five well-defined, deep indentations on body.
54. Ditch fill 139. Type EE; indented beaker. Probably C31.

#### *Bowls and Dishes*

55. Well fill 317/B/1. Type C40.
56. Layer 107. Type C40.
57. Well fill 317/B/1. Type C40.
58. Well fill 317/A/1. Type very uncertain, but perhaps C41, with rouletting both on the outer face and on the internal lip of the rim.
59. Well fill 317/B/1. Type C44/C45.
60. Layer 102. Type C44/C45, with stamp SF13. On both Nos. 59 and 60 the bead rim is perhaps larger than is strictly admissible for C44, but it is slightly hooked, in contrast to most of the examples certainly of C45. Extreme hooked rims as on Nos. 67-68 are, however, assigned to C45.
61. Well fill 317/B/1. Type C45 variant with no real definition of bead rim and two distinct internal grooves rather than the more usual one.
62. Well fill 317/B/1. Type C45.
63. Well fill 317/B/1. Type C45 with stamp SF17.
64. Well fill 317/A/4. Type C45.
65. Well fill 317/A/1. Type C45 with internal rouletted line.
66. Pit fill 151. Type C45 with stamp SF4.
67. Well fill 317/A/2. Type C45 with stamp SF14.
68. Pit fill 312/A/1. Type C45 variant with long overhanging bead. Stamp SF10.
69. Well fill 317/B/1. Type C46, a distorted waster.
70. Well fill 317/A/3. Deep, angular footing base, perhaps from type C45, with stamp SF2.
71. Well fill 317/B/1. Angular footing base, perhaps from type C45, with stamp SF7.
72. Unstratified. Shallow, rounded footing base, perhaps from type C45, with stamp SF1.
73. Well fills 317/A/1 and 317/A/3. Shallow, vertical footing base from large bowl, possibly type C45. Multiple rouletted rings on interior.
74. Well fill 317/A/4. Type C47.
75. Layer 102. Type C47.

<sup>160</sup> X, 151-2.

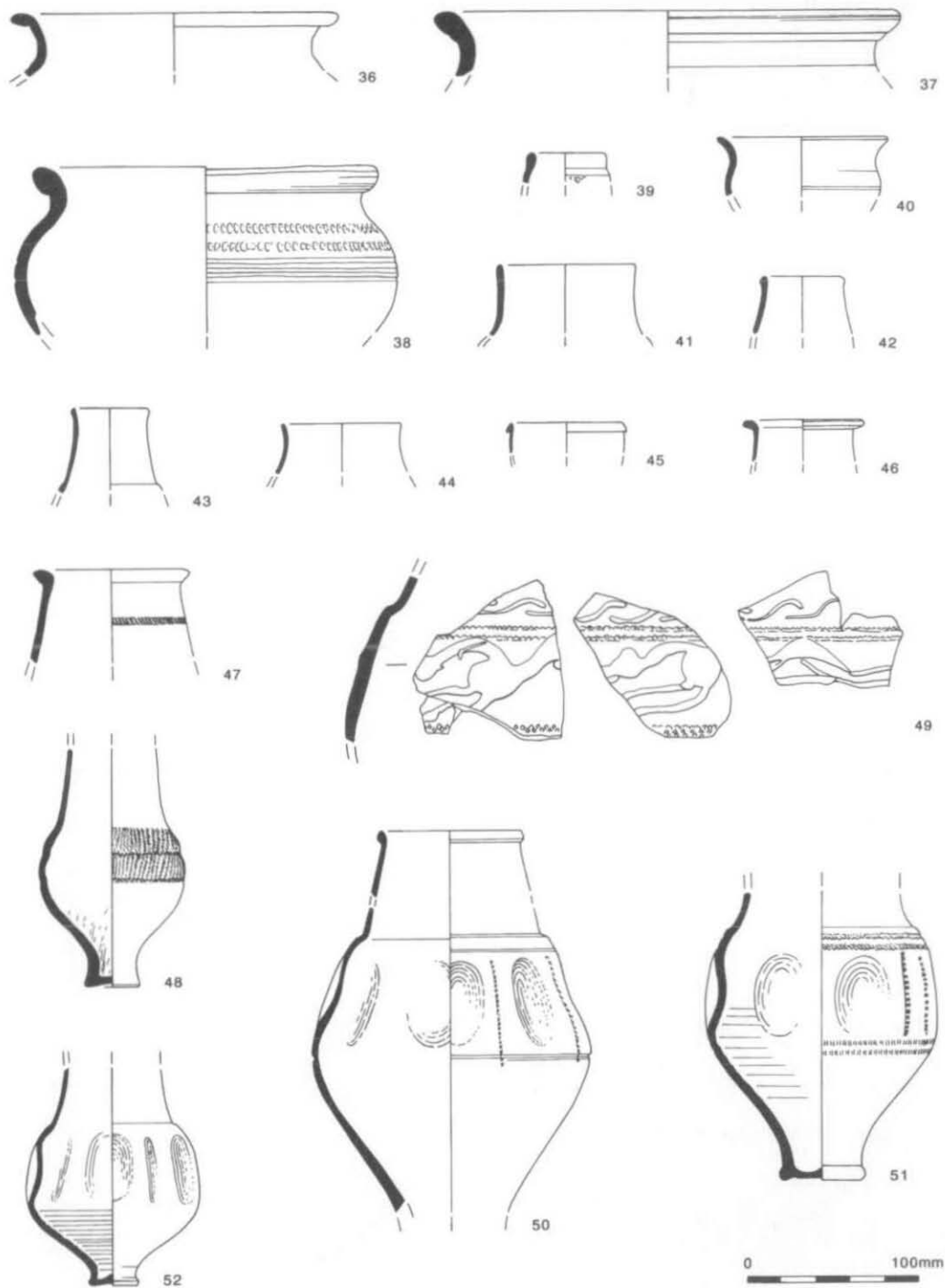


Fig. 28. Lower Farm, Nunham Courtenay: vessels 36-52, fabric F51; scale 1:4.

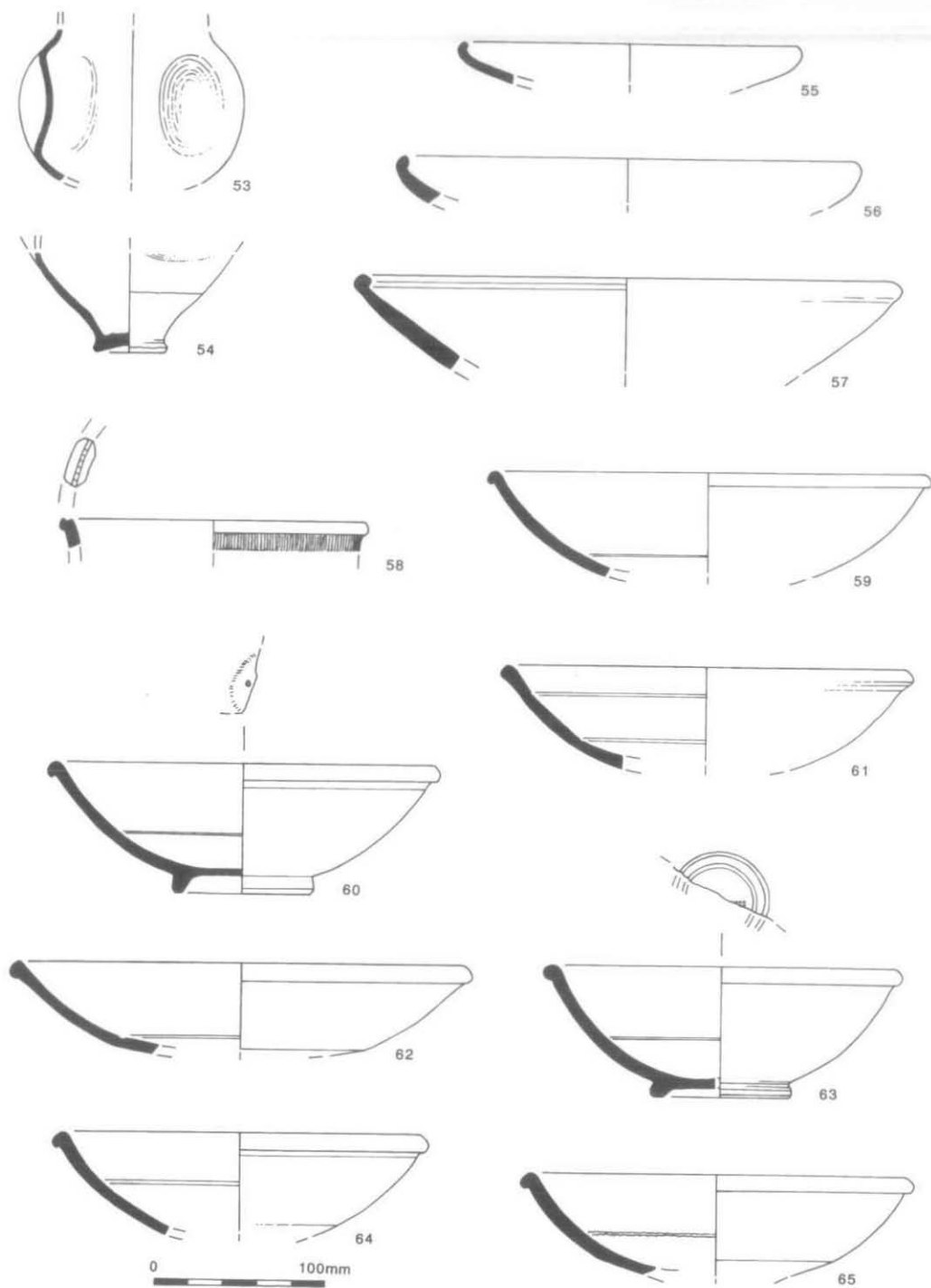


Fig. 29. Lower Farm, Nuneham Courtenay: vessels 53–65, fabric F51; scale 1:4.

76. Well fill 317/B/1. Type C47.
77. Well fill 317/B/1. Type C47. Recorded as fabric OE.
78. Well fill 317/A/2. Type C51.
79. Well fill 317/A/2. Type C51.
80. Gully fill 217/B/1. Type C51.
81. Well fill 317/A/2. Type C51.
82. Well fill 317/B/1. Type C51. C51 exhibits a wide range of variation of rim type.
83. Well fill 317/B/1. Type C52, with fragmentary arcs of white paint.
84. Well fill 317/B/1. Type C54.
85. Well fill 317/A/4. Type C55.
86. Well fill 317/B/1. Type C55.
87. Well fill 317/A/2. Type C55.
88. Well fill 317/A/2. Type C55. Nos. 87 and 88, with a slight change of angle on the body wall, may be seen as an interim form between C55 and C81.
89. Well fill 317/A/2. Type C57, with rouletted, stamped (SF20) and ?incised arc decoration.
90. Well fill 317/A/2. Perhaps type C68.
91. Well fill 317/A/1. Type C68. The distinction between these examples of C68 and type C55 is not very clearly drawn.
92. Well fill 317/B/1. Type C68.
93. Well fill 317/A/2. Type C71.
94. Layer 202. Type C75.
95. Layer 329. Type C78 with rosette stamp SF22.
96. Layer 108. Type HD; necked bowl with curving everted rim. The type is perhaps related to the C75 family, but the rim form is markedly different.
97. Well fill 317/A/2. Type C81.
98. Well fill 317/A/1. Type C81.
99. Well fill 317/A/1. Type C81.
100. Layer 108. Perhaps type C84.
101. Layer 103. Type C84 with stamped decoration using motifs SF23 and SF24 (above).

*Miscellaneous types*

102. Layer 301/A/1. Type C87 lid.
103. Layer 108. Type C88.
104. Layer 108. Type C88.
105. Well fill 317/C/1. Type C88.
106. Well fill 317/B/1. Large pedestal/footstand base of unknown form.

*'Miniature' vessels*

107. Well fill 317/A/2. Type C101.
108. Well fill 317/A/2. Type C101.
109. Well fill 317/A/2. Type C101.
110. Well fill 317/A/2. Type C101.
111. Well fill 317/A/2. Type C101.
112. Well fill 317/A/1. Type C101.
113. Well fill 317/B/1. Type C101.
114. Gully fill 217/A/1. Probably type C101.  
The various examples of C101 show a variety of rim forms and details such as the position of grooves; nevertheless they are very consistent in size and proportions. A maximum rim diameter of c. 100 mm is suggested as the cutoff point between this 'miniature' form and other jar types, particularly C18.
115. Well fill 317/A/2. Type C102.
116. Well fill 317/A/2. Type C102. The occurrence of C102 in well 317 is a strong argument against the very late 4th century date for this type proposed by Young.<sup>161</sup> As with C101 a size cutoff point between this vessel and beakers of type C22 etc can be suggested. A maximum height of c. 100 mm is suggested for C102.
117. Well fill 317/B/1. Type C110.

<sup>161</sup> Y, 174.

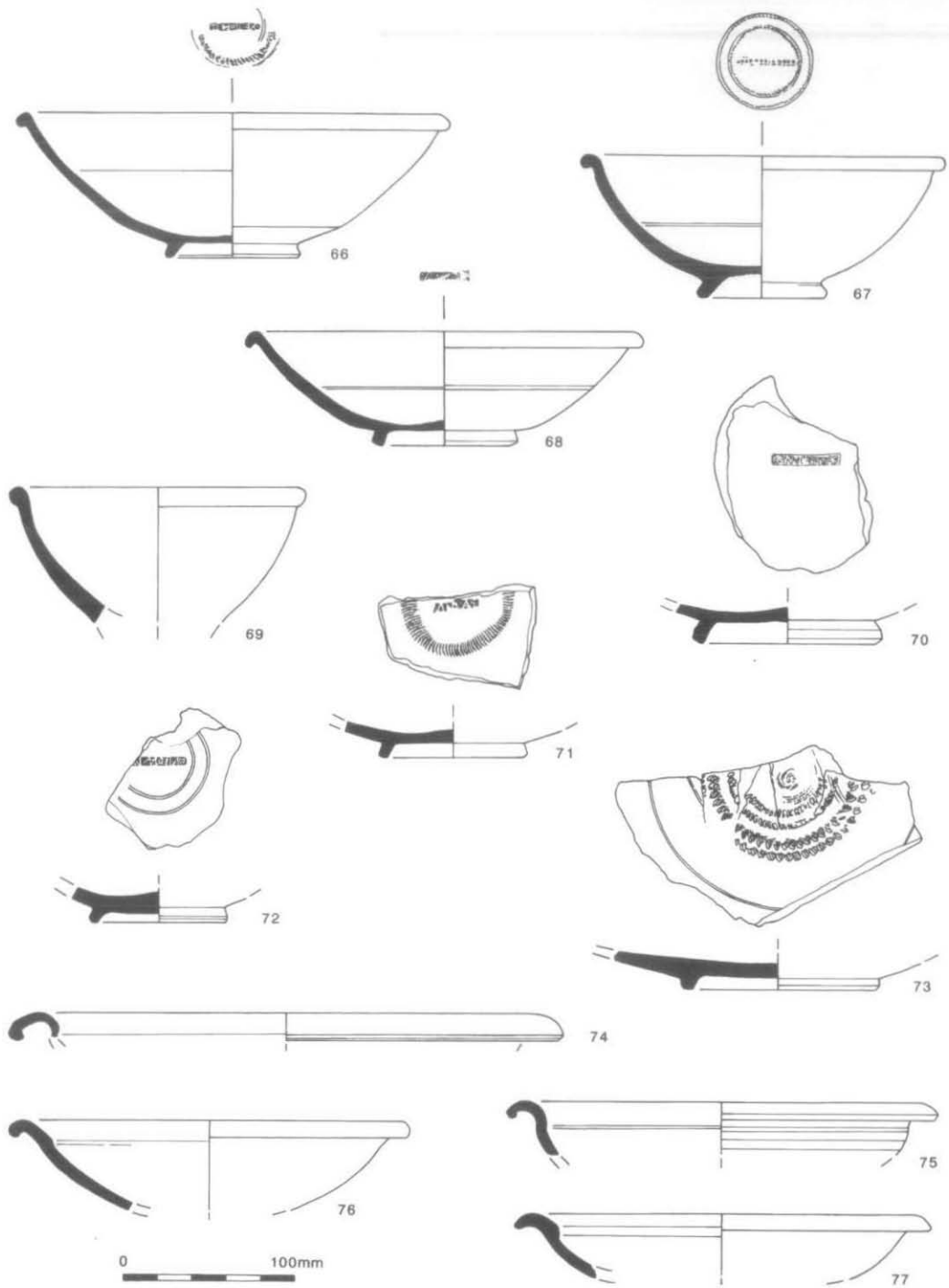


Fig. 30. Lower Farm, Nuneham Courtenay; vessels 66-77, fabric F51; scale 1:4.

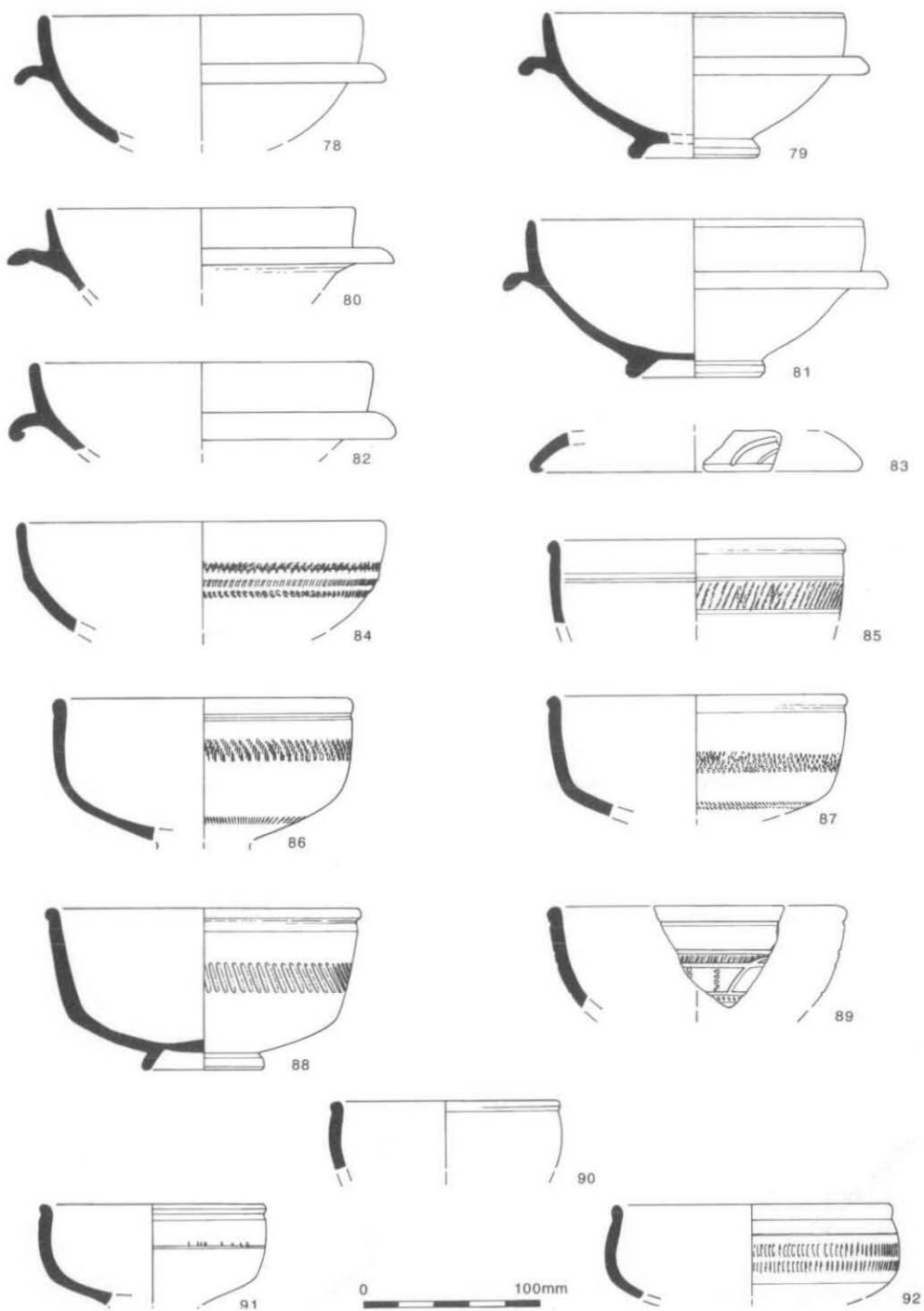


Fig. 31. Lower Farm, Nuneham Courtenay: vessels 78-92, fabric F51; scale 1:4.

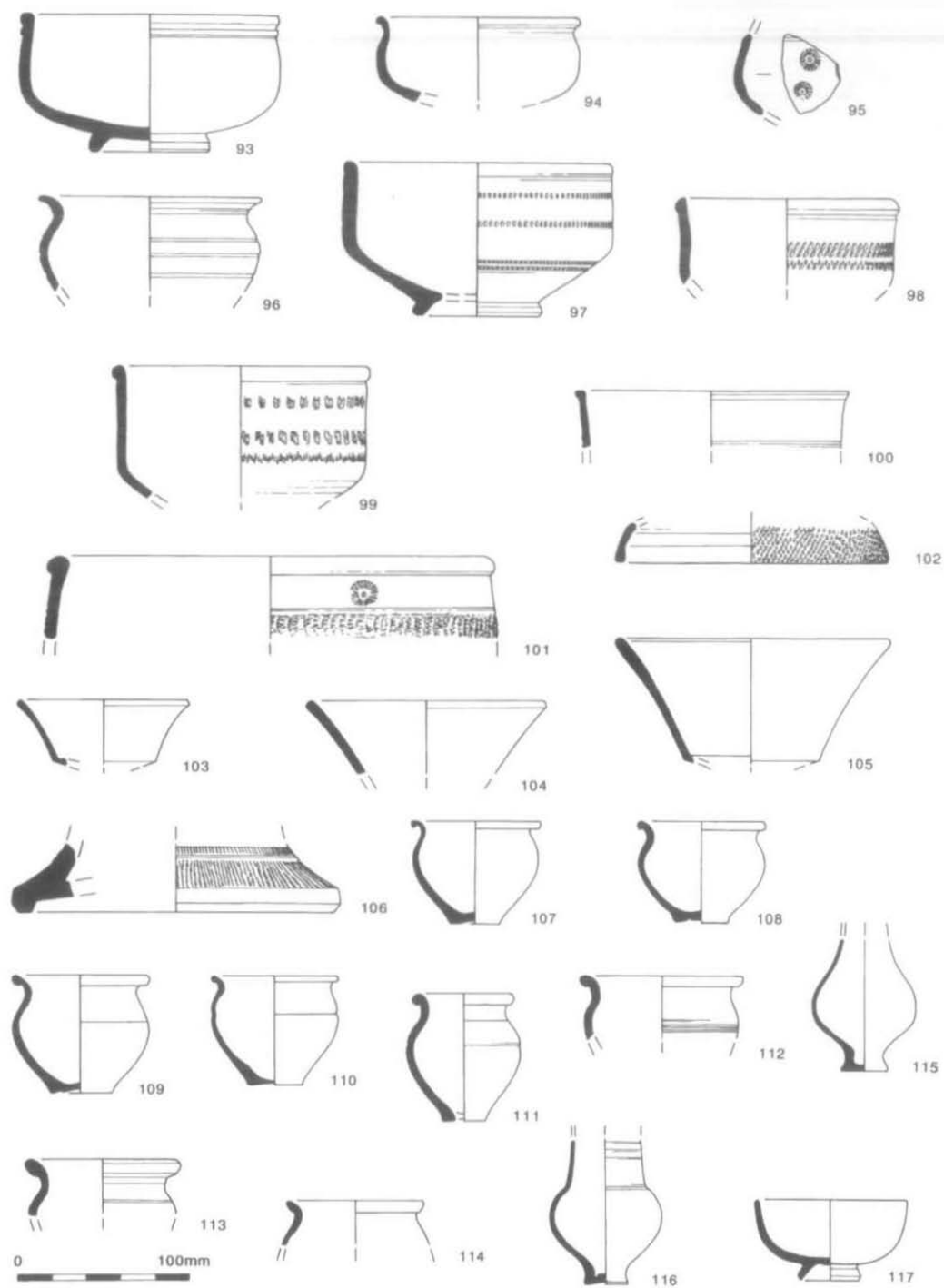


Fig. 32. Lower Farm, Nuneham Courtenay: vessels 93-117, fabric F51; scale 1:4.



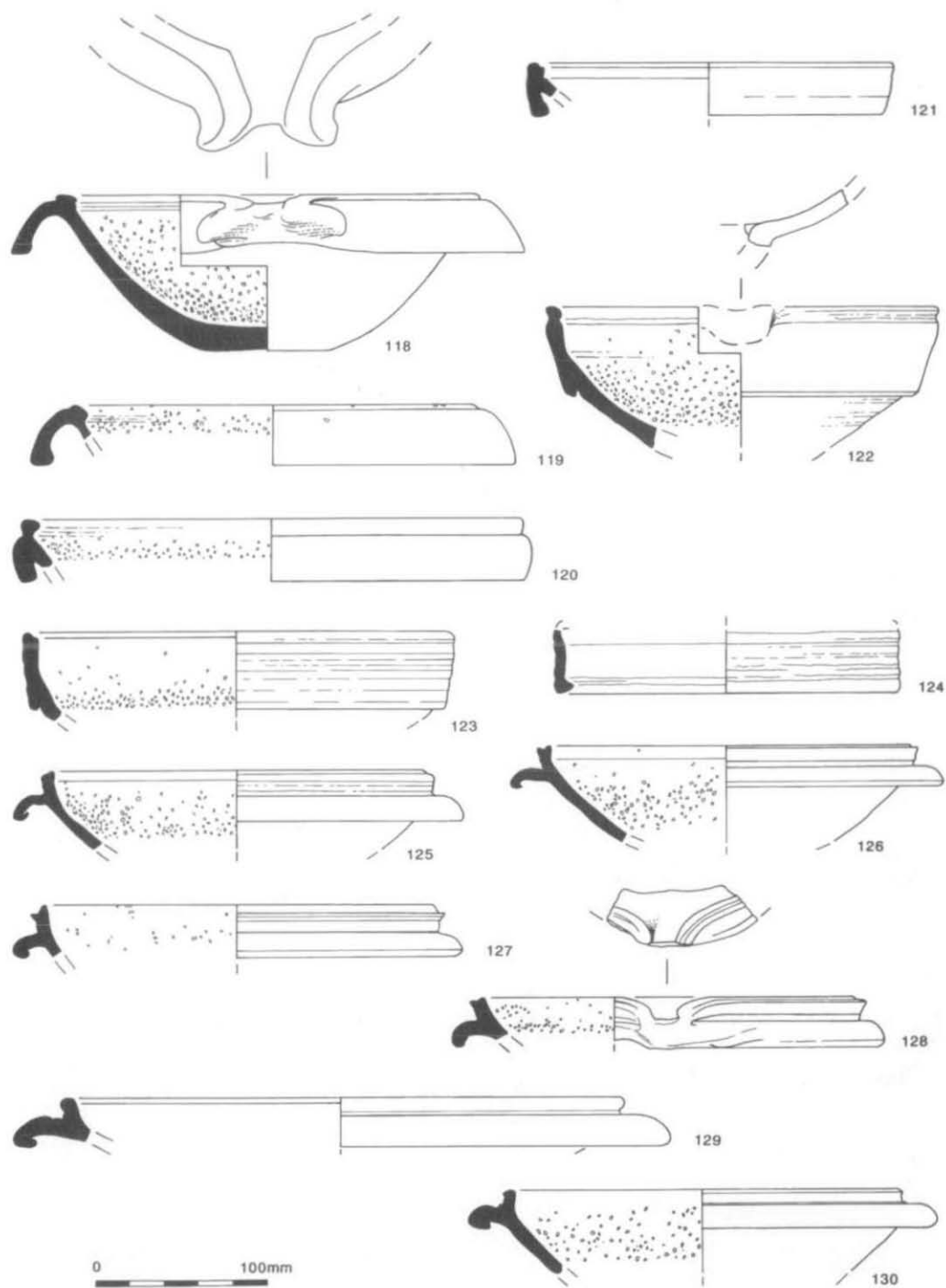


Fig. 33. Lower Farm, Nuneham Courtenay: vessels 118-130, fabric M22; scale 1:4.

*Fabric M22*

118. Layer 303. Type M3.  
 119. Layer 311. Type M3.  
 120. Ditch fill 321. Type M10.  
 121. Layer 302. Type M14.  
 122. Well fill 317/B/1. Type M14.  
 123. Layer 102. Type M15, with very lightly corrugated rim. A hybrid between M14 and M15.  
 124. Layer 302. Type M15.  
 125. Layer 108. Type M17.  
 126. Layer 102. Type M17.  
 127. Layer 108. Type M17.  
 128. Layer 102. Type M17.  
 129. Layer 106. Type M17.  
 130. Pit fill 312/A/1. Type M17.  
 131. Layer 106. Type M17.  
 132. Layer 102. Type M17.  
 133. Layer 108. Type M17.  
 134. Well fill 317/B/1. Type M17.  
 135. Layer 108. Type M17.

The M17 rims range from ones with slender flanges and elaborate beads (Nos. 125–126) through shorter hook-ended rims (Nos. 130–131) not dissimilar to some examples of type M22 (e.g. No. 148) to fairly plain elongated flanges and simple upright beads (Nos. 134–135).

136. Layer 102. Type M18.  
 137. Layer 108. Type M18.  
 138. Layer 102. Type M18.

The M18 rims are comparable to those in M17 except that the hooked end of the flange is closed.<sup>162</sup> In this type the length of the flange was considered particularly important in making the distinction from some examples of type M22.

139. Layer 103. Type M20  
 140. Pit fill 110/A/1. Type M21.  
 141. Well fill 317/A/2. Type M22.  
 142. Layer 330. Type M22.  
 143. Ditch fill 303/A/1. Type M22.  
 144. Well fill 317/A/1. Type M22.  
 145. Layer 107. Type M22.  
 146. Layer 329. Type M22.  
 147. Layer 207. Type M22.  
 148. Layer 317/A/1. Type M22.  
 149. Ditch fill 303/A/1. Type M22.  
 150. Layer 329. Type M22.  
 151. Layer 202. Type M22.  
 152. Layer 107. Type M22.  
 153. Well fill 317/A/1. Type M22.  
 154. Layer 207. Type M22.  
 155. Well fill 317/A/2. Type M22.

The variety of rim types in M22 is considerable. The beads are usually less elaborate than in M17. Spouts are usually formed by breaking and smoothing over the bead (e.g. Nos. 143 and 146). The more carefully formed spout of No. 141 is, like the detail of the upper part of the bead, closer to M17 than most examples of M22 (cf e.g. the spout of No. 128).

156. Layer 301. Type M23, or possibly a very large version of M18 (see discussion above).

*Fabric M31*

157. Layer 102. Type WC4.  
 158. Layer 329. Type WC4.  
 159. Layer 329. Type WC4.

<sup>162</sup> Y, 72.

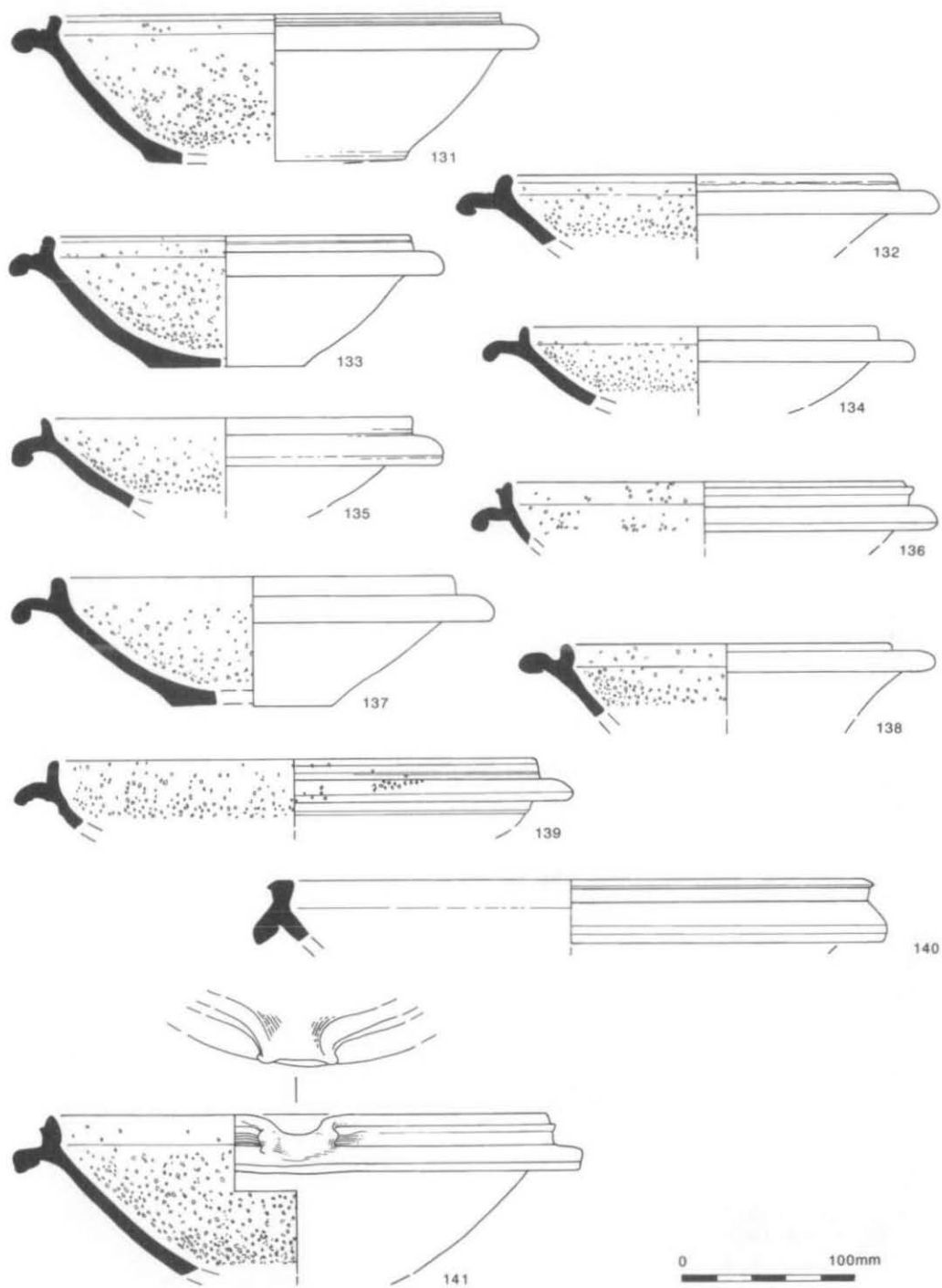


Fig. 34. Lower Farm, Nunham Courtenay; vessels 131-141, fabric M22; scale 1:4.

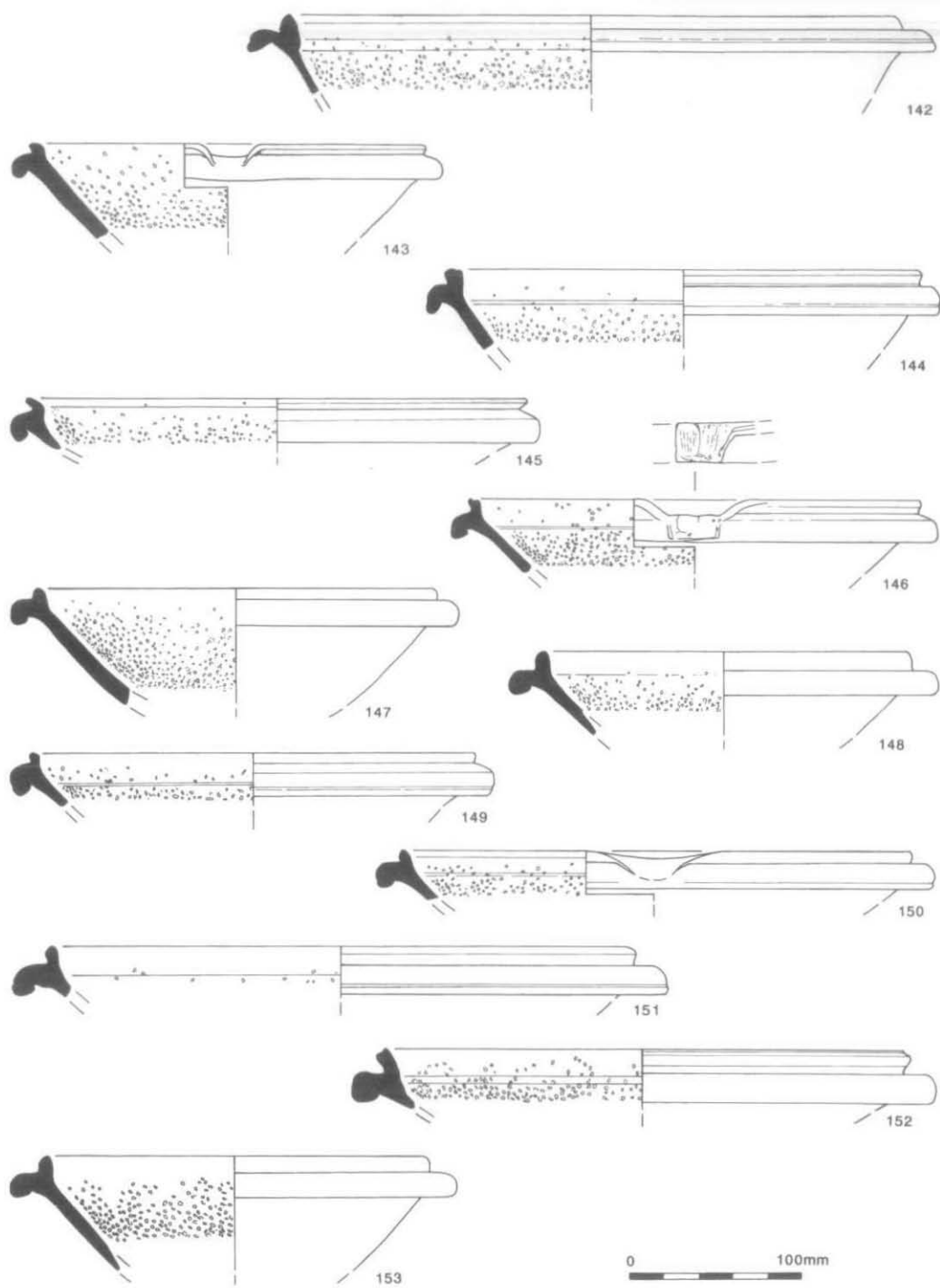


Fig. 35. Lower Farm, Nunham Courtenay: vessels 142-153, fabric M22; scale 1:4.

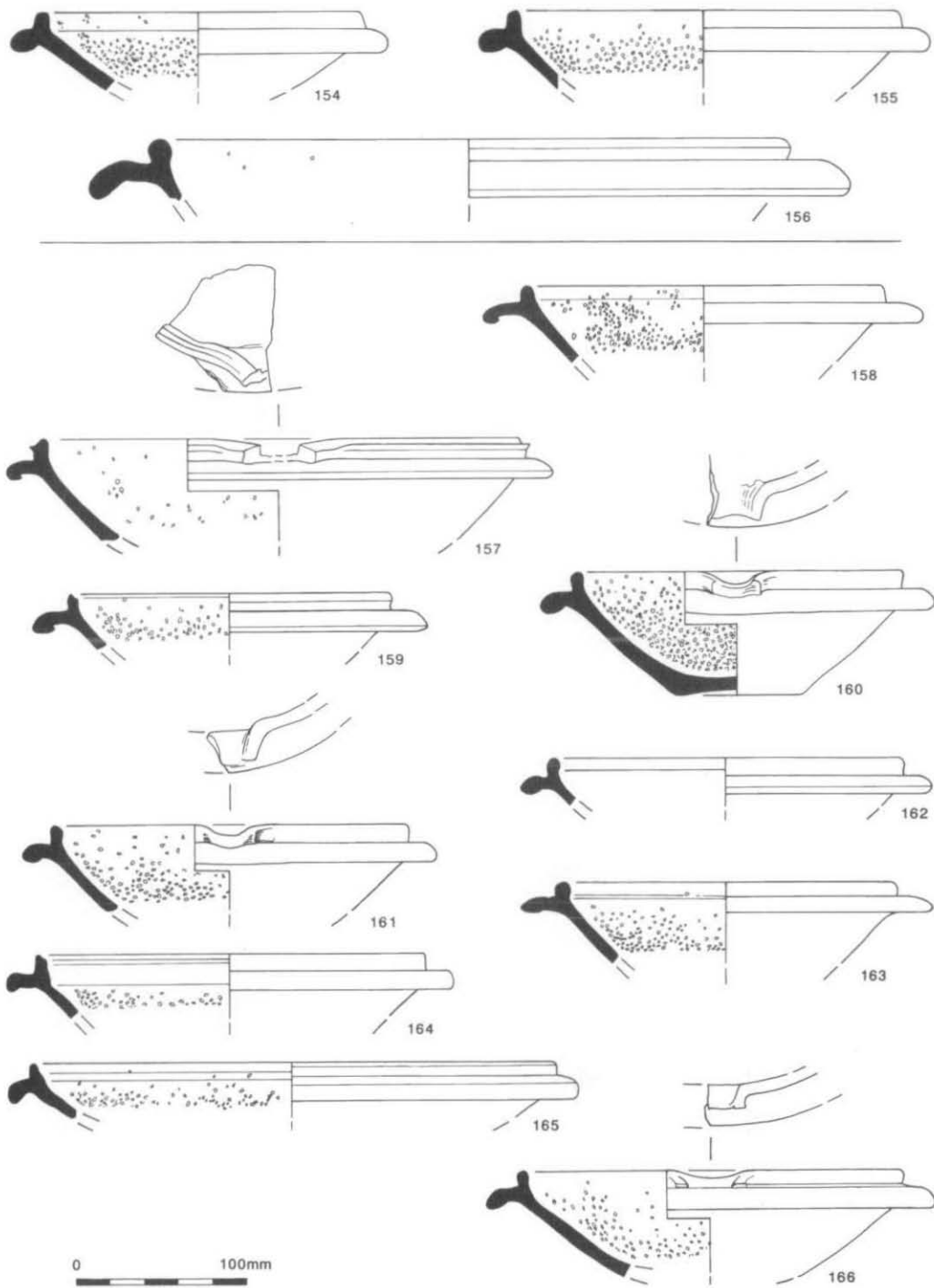


Fig. 36. Lower Farm, Nuneham Courtenay: vessels 154-166, fabrics M22 and M31; scale 1:4.

- 160. Well fill 317/B/1. Type WC4.
- 161. Well fill 317/A/2. Type WC5.
- 162. Well fill 317/B/1. Type WC5.
- 163. Layer 302/B/1. Type ?WC5.
- 164. Layer 106. Type WC7.
- 165. Layer 329. Type WC7.
- 166. Well fill 317/B/1. Type WC7.
- 167. Well fill 317/A/2. Type WC7.
- 168. Layer 329. Type WC7.
- 169. Layer 303/A/1. Type WC7.

The distinction between WC4/WC5 and WC7 was less clearly drawn than the corresponding one between M17/M18 and M22. In particular, the length of the flange was less useful as a guideline. The assignment of No. 163 to WC5 and of No. 166 to WC7, for example, is admittedly somewhat arbitrary. As with the white ware mortaria, the definition of the spout seems to be more precise in the 3rd century than in the predominantly 4th century type.

#### *Fabric M41*

- 170. Well fill 317/C/1. Type C97.
- 171. Well fill 317/C/1. Type C97.
- 172. Well fill 317/C/1. Type C97.

In all these examples the spout is well formed. The wall of the vessel is pierced right through and eyes, ears and whiskers are indicated (see discussion of decorative techniques in this fabric, in section on fabric descriptions above).

- 173. Well fill 317/A/2. Type C97.
- 174. Well fill 317/A/2. Type C97.
- 175. Well fill 317/A/1. Type C97.
- 176. Well fill 317/A/1. Type C97. Decoration of impressed rings.
- 177. Well fill 317/A/1. Type C98, with vestigial white painted decoration.
- 178. Layer 329. Type C100.
- 179. Layer 329. Type C100 with rouletted decoration on the rim.
- 180. Layer 329. Type C100 with a single rouletted band on the rim.
- 181. Layer 329. Type C100.

#### *Fabric W11*

- 182. Well fill 317/B/1. Perhaps type P8, but not strictly wide mouthed in the sense that the rim diameter is greater than the vessel girth.

#### *Fabric W12*

- 183. Layer 207. Type W3. A small example.
- 184. Layer 106. Type W3.
- 185. Pit fill 180. Type B; neck/shoulder and base of a thin walled, narrow necked flagon or flask.
- 186. Layer 311. Type W7/8.
- 187. Well fill 317/B/1. Type W7/W8 but with two handles.
- 188. Layer 302/A/2. Type W9.
- 189. Well fill 317/B/1. Type W28.
- 190. Ditch fill 189. Type W31.
- 191. Layer 108. Type C; probable globular jar, exact type uncertain.
- 192. Layer 106. Type W33.
- 193. Layer 112. Type W33.
- 194. Ditch fill 189. Type W33. The most common variant of this form, as W33.6.
- 195. Layer 206. Type W36.
- 196. Ditch fill 128. Base, perhaps of type W36.

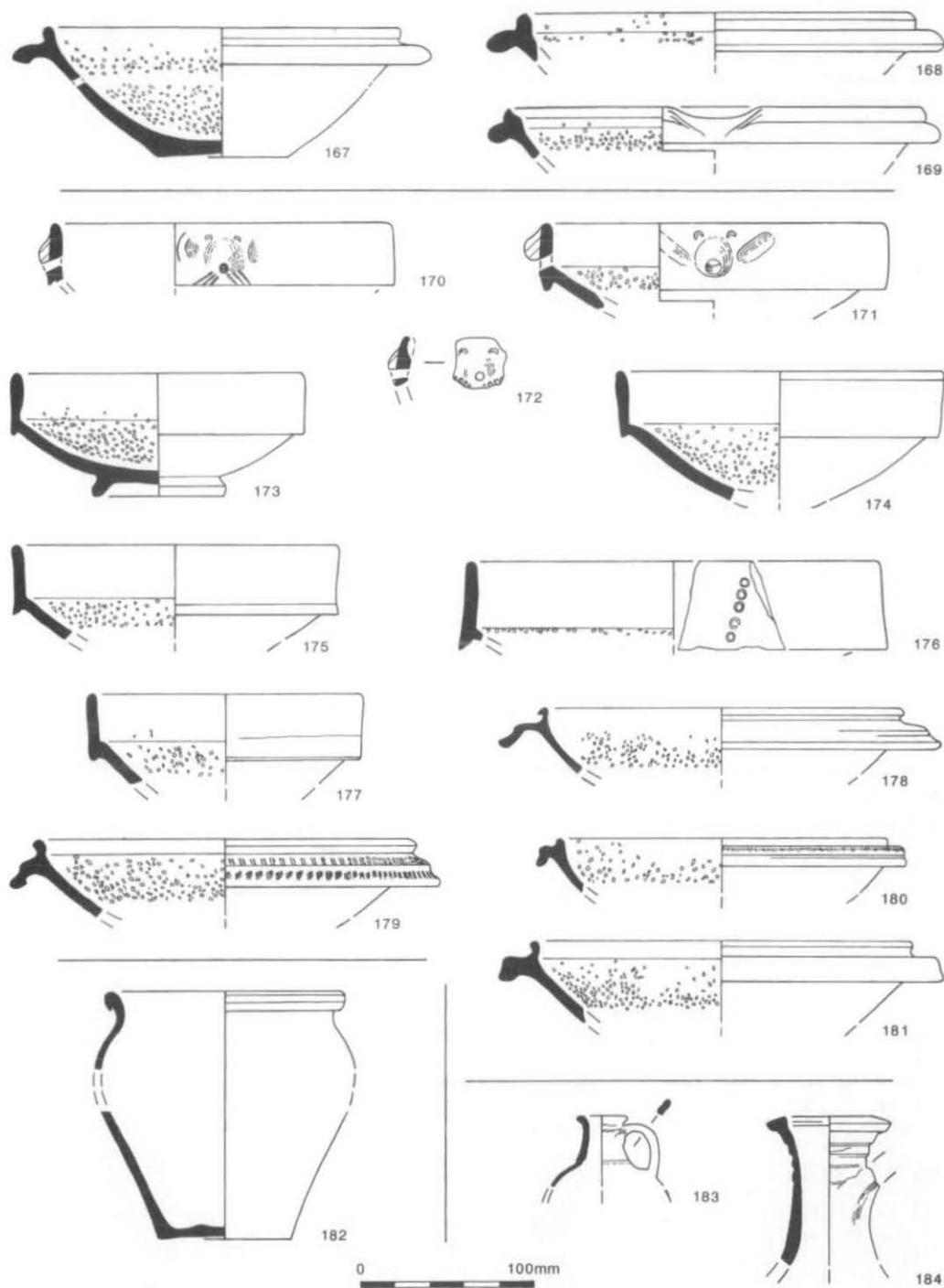


Fig. 37. Lower Farm, Nuneham Courtenay: vessels 167-184, fabrics M31, M41, W11 and W12; scale 1:4.

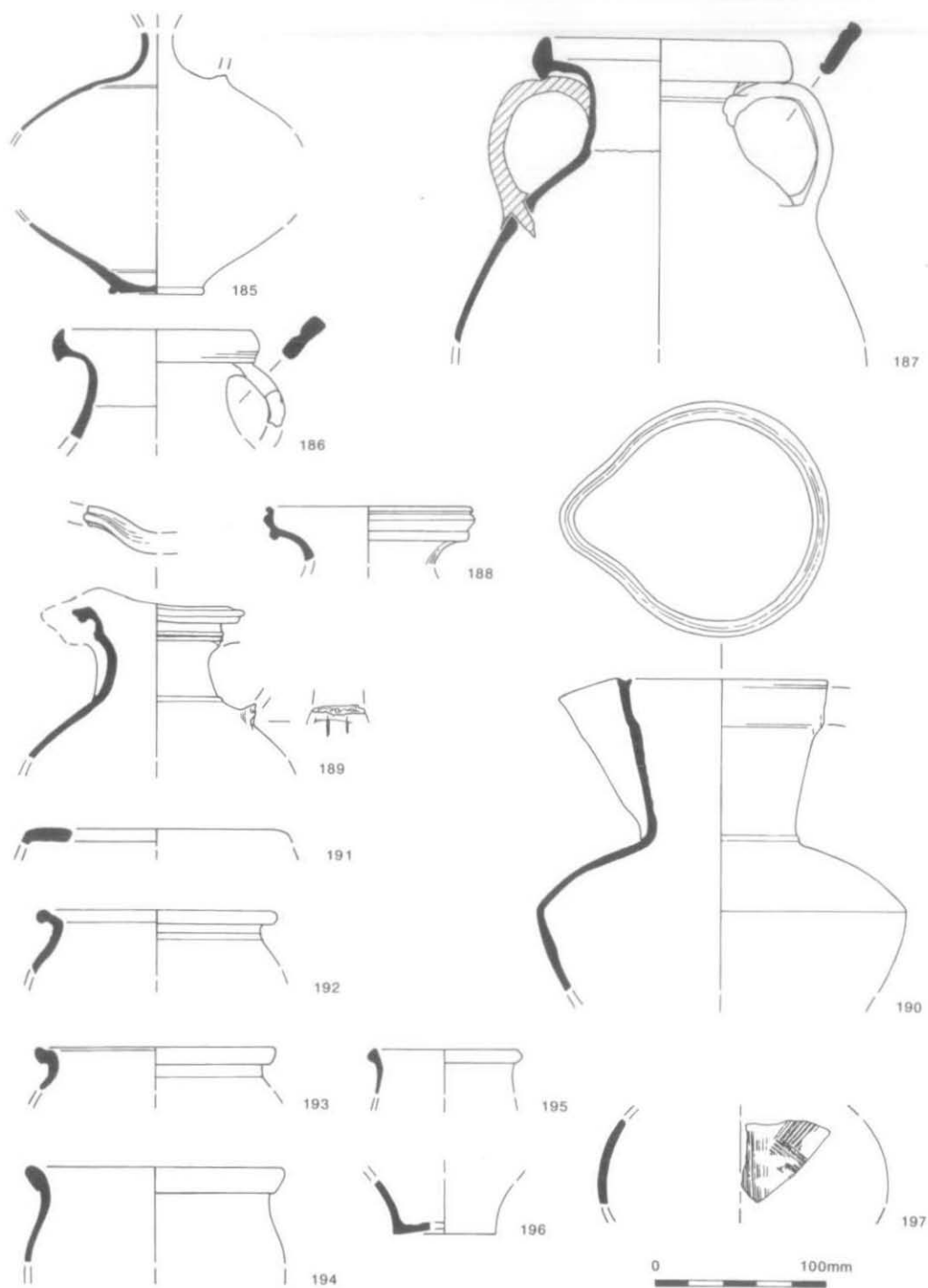


Fig. 38. Lower Farm, Nuneham Courtenay: vessels 185-197, fabric W12; scale 1:4.



197. Ditch fill 128. Body sherd, perhaps from type W36, with combed decoration in vertical and oblique bands.  
 198. Layer 311. Type W37.  
 199. ?Post base 167/A/1. Type W38.  
 200. Layer 311. Type W53. The panels of dots are in low relief and are in contrasting red paint/slip rather than barbotine.  
 201. Layer 311. Type W54. Circles in red paint.  
 202. Ditch fill 137/A/1. Type W54. Decorative motifs in red paint.  
 203. Layer 102. Type HB; tall ?bowl form with fairly elaborate rim and groove on body wall. The height is uncertain since the two extant pieces do not overlap. The fabric is similar to parchment ware (W11).

#### *Fabric W22*

204. Layer 108. Type W32, although it is strictly medium mouthed.  
 205. Well fill 317/A/3. Probably type W36.  
 206. Layer 108. Type E; uncertain beaker.  
 207. Layer 107. Carinated bowl type between W46 and the parchment ware copies W56 and W57.  
 208. Layer 108. ?Type W73.  
 209. Layer 112. Small base from uncertain type, but perhaps a simple form like W74 and W75.

#### *Fabric W23*

210. Layer 106. Type BW2. Most closely comparable to BW2.3.

#### *Fabric Q21*

211. Layer 329. Type WC1. Closely comparable to WC1.1.  
 212. Layer 329. Type BA; narrow necked flagon.  
 213. Layer 112. Type BB; large flagon with concavity on inside of thickened, everted rim.  
 214. Well fill 317/A/2. Type BD; spouted jug with simple two-ribbed handle.  
 215. Layer 207. Perhaps type WC2. Medium or narrow mouthed jar (or possibly flagon/jug).  
 216. Layer 329. Type WC2.  
 217. Well fill 317/A/2. Type WC2.  
 218. Well fill 317/A/2. Type WC2.  
 219. Well fill 317/A/1. Type WC2.  
 220. Layer 329. Type WC2.  
 Nos. 216-219 represent the characteristic Lower Farm form of this type.  
 221. Well fill 317/A/1. Type WC3. Bands of red paint on interior and on top of rim.  
 222. Layer 207. Type WC3.  
 223. Well fill 317/A/1. Type WC3. Single band of red paint above carination.

#### *Fabric O11*

##### *Stamps*

- SO1. ?Layer 141. Nonsense stamp on type O48 (No. 255).  
 SO2. Layer 302. Nonsense stamp on dish base (No. 263).  
 SO3. Layer 149. Nonsense stamp on footring base.  
 SO4. Layer 107. Fragmentary nonsense stamp.  
 SO5. Layer 112. Damaged nonsense stamp on ?cup base (No. 250).  
 SO6. Layer 311. Worn nonsense stamp on type O41 (No. 242).  
 SO7. Layer 112. Fragmentary nonsense stamp on footring base (No. 262).

##### *Flagons*

224. Well fill 317/A/2. Type BA; narrow-necked flagon or flask. Similar to the colour-coated type C1.1. It is just possible that this is a very worn example of that type, but the fabric is a little more sandy than would normally be the case for F51.

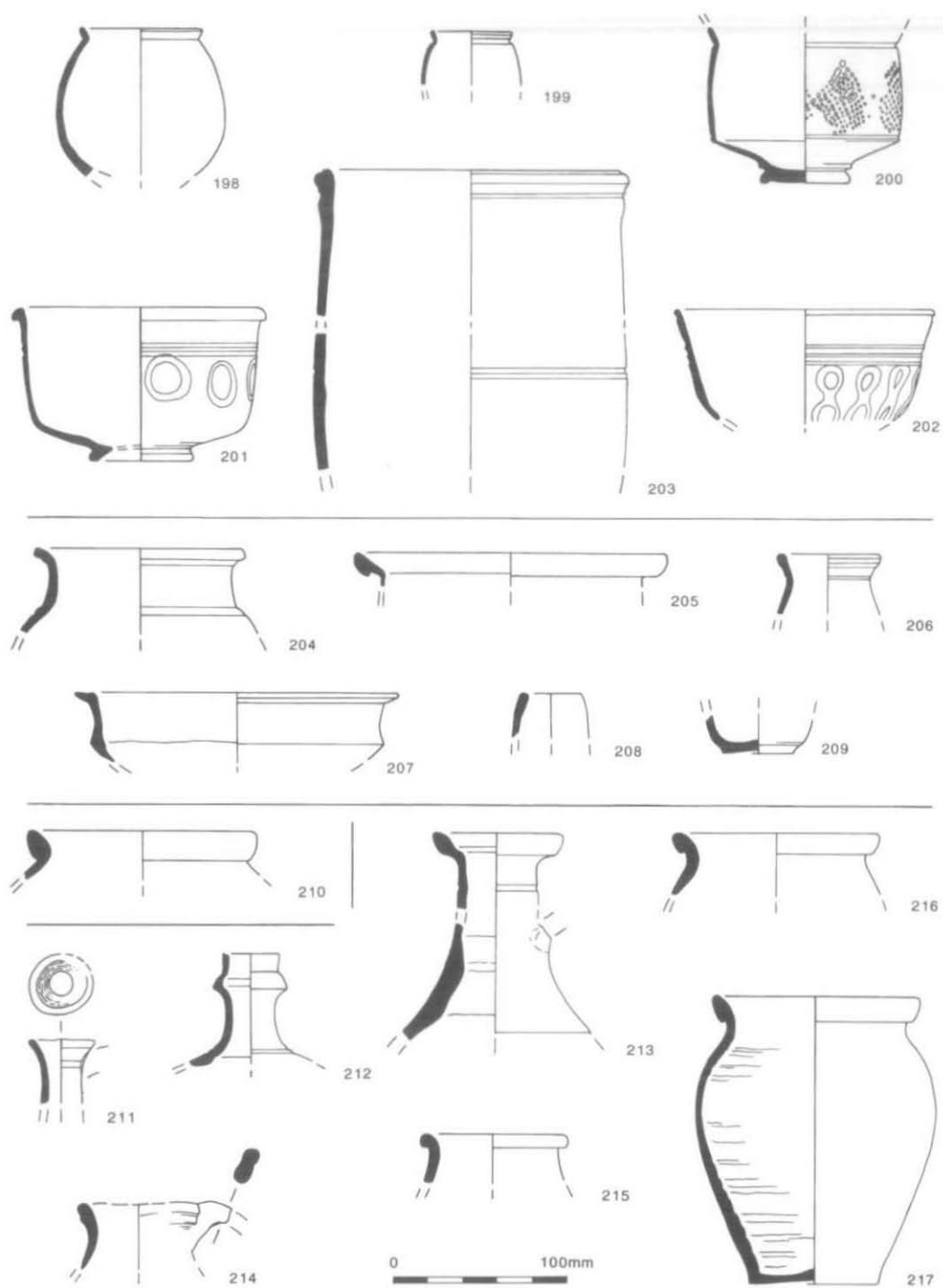


Fig. 39. Lower Farm, Nuneham Courtenay: vessels 198-217, fabrics W12, W20, W23 and Q21; scale 1:4.

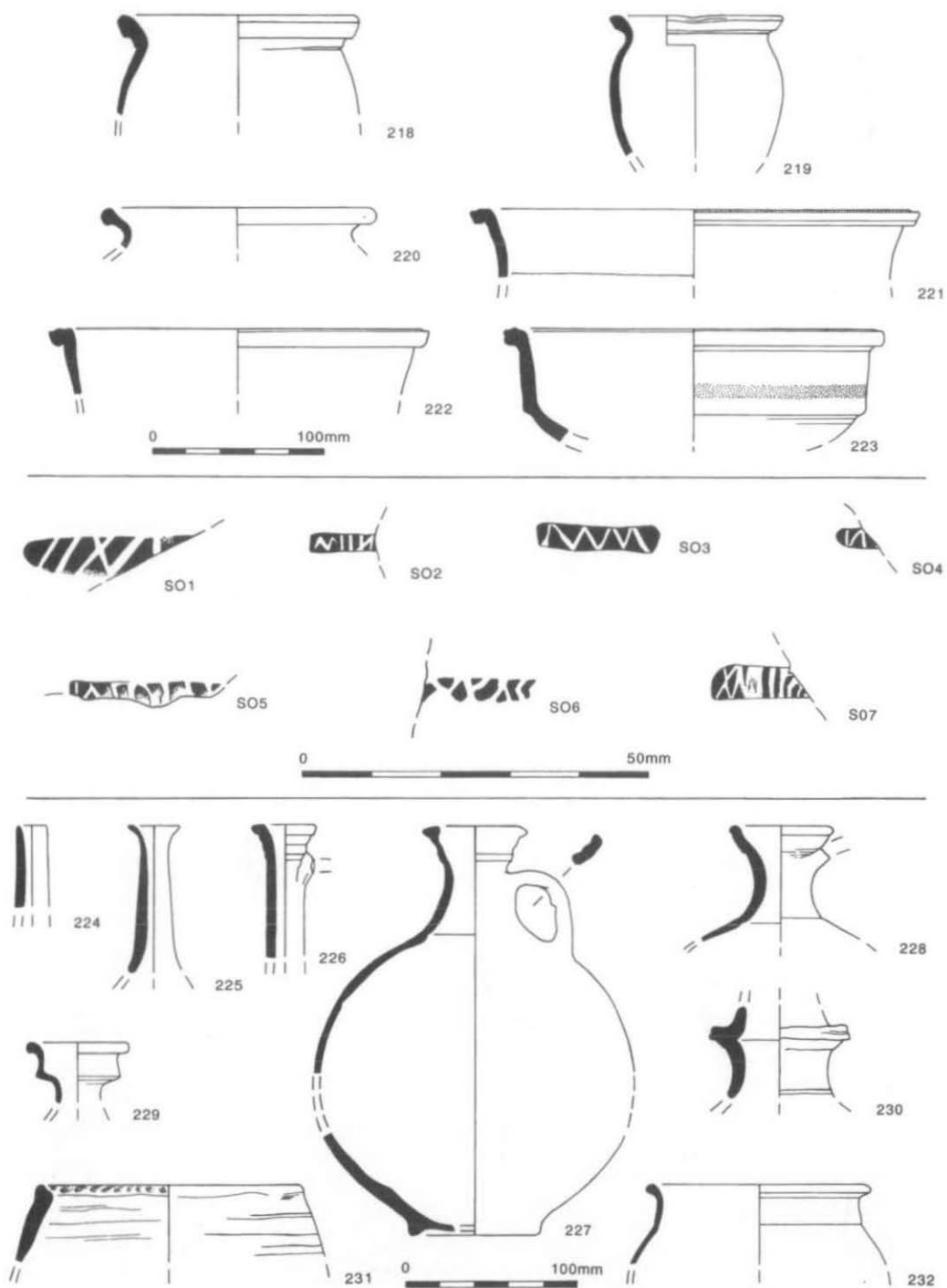


Fig. 40. Lower Farm, Nuneham Courtenay: vessels 218-232 and stamps SO1-SO7, fabrics Q21 and O11; scale 1:4. (vessels) and 1:1 (stamps).

225. Layer 302/A/4. Type BA; narrow-necked flagon or flask.  
 226. Well fill 317/B/1. Type BA; narrow-necked flagon or flask with single handle. Similar to No. 225 above, but ring-necked.  
 227. Layer 311. Type BA; ring-necked flagon with three-ribbed handle. The type is as W2 and a 2nd century date seems certain.  
 228. Layer 311. Type BA; flagon with flaring, slightly dished neck and single handle.  
 229. Unstratified. Type BA; flagon with sharply stepped neck and everted rim.  
 230. Layer 112. Probably type O5. The dating suggested by the context (late 3rd–4th century) is consistent with that proposed by Young.<sup>163</sup>

#### *Jars and Beakers*

231. ?Layer 313 and layer 329. Type CB; barrel-shaped jar of Iron Age type, apparently hand made. The fabric, however, is consistent with the Romanised products of Lower Farm and contrasts with that of the other Iron Age sherds from the site.  
 232. Layer 112. Type O10.  
 233. Layer 311. Type O14. This example, while not an exact parallel, is closer to Young's O14.1 than the Shakenoak vessel from which a 4th century date is inferred for the type.<sup>164</sup> The context of the Lower Farm vessel is most unlikely to be later than mid-late 2nd century.  
 234. Well fill 317/A/2. Type CD; medium mouthed jar. This vessel may fall within the range of O10–O11, but there are no close parallels.  
 235. Layer 107. Type C; jar, probably medium mouthed. Comments as No. 234.  
 236. Ditch fill 137/A/1. Type O18.  
 237. Layer 311. Type EC; bag shaped beaker with angled everted rim (cf O18) and roughcast decoration. Oxidised roughcast beakers have been noted at Dorchester-on-Thames,<sup>165</sup> though the rim forms are not exactly the same as at Lower Farm.  
 238. Layer 101. Type E; beaker with rounded cornice rim, perhaps O20.

#### *Bowls, dishes etc*

239. Ditch fill 138/A/1. Type HD; globular bowl with sharply angled everted rim. The context suggests a 2nd century date.  
 240. Well fill 317/A/1. Type HB; straight sided bowl with rim typologically between O29 and O31. Late 3rd–4th century.  
 241. Layer 141. Type O34.  
 242. Layer 311. Type O41 with stamp SO6.  
 243. Layer 311. Type O41.  
 244. Ditch fill 137/A/1. Type O41.  
 245. Layer 107. Type O41.  
 The degree of definition of the bead rim is very variable in this type.  
 246. Layer 107. Type FB; cup imitating Drag. 27. This corresponds to the reduced ware type R62, but has not been previously recorded in oxidised ware.  
 247. Layer 311. Type O43.  
 248. Layer 311. Type O43.  
 249. Layer 311. Type O43, but more widely flaring than usual. The context of these vessels suggests that the type was in production by the mid-late 2nd century.  
 250. Layer 112. Delicate footring base, probably for a cup, with stamp SO5.  
 251. Layer 329. Type O44.  
 252. Layer 141. Type O44.  
 253. Layer 311. Type O45.  
 254. Layer 107. Type HC; bowl with hooked flange rim and very small bead projecting above. There is some similarity with type O48.  
 255. Layer 141. Type O48 with stamp SO1. This is not very close to O48.1, but the common ancestry is clear.  
 256. Layer 302/B/2. Type HC; curving sided bowl with downsloping flange. The tip of the flange is grooved.  
 257. Layer 313. Type HC as No. 256. This type may be another variant on the theme of Drag. 38. The position

<sup>163</sup> Y, 193.

<sup>164</sup> A.C.C. Brodribb, A.R. Hands and D.R. Walker, *Excavations at Shakenoak Farm, near Wilcote, Oxfordshire, Part IV: Site C* (1973), 75–6, no. 684.

<sup>165</sup> Frere, *op. cit.* note 137, 138, nos. 149 and 154.

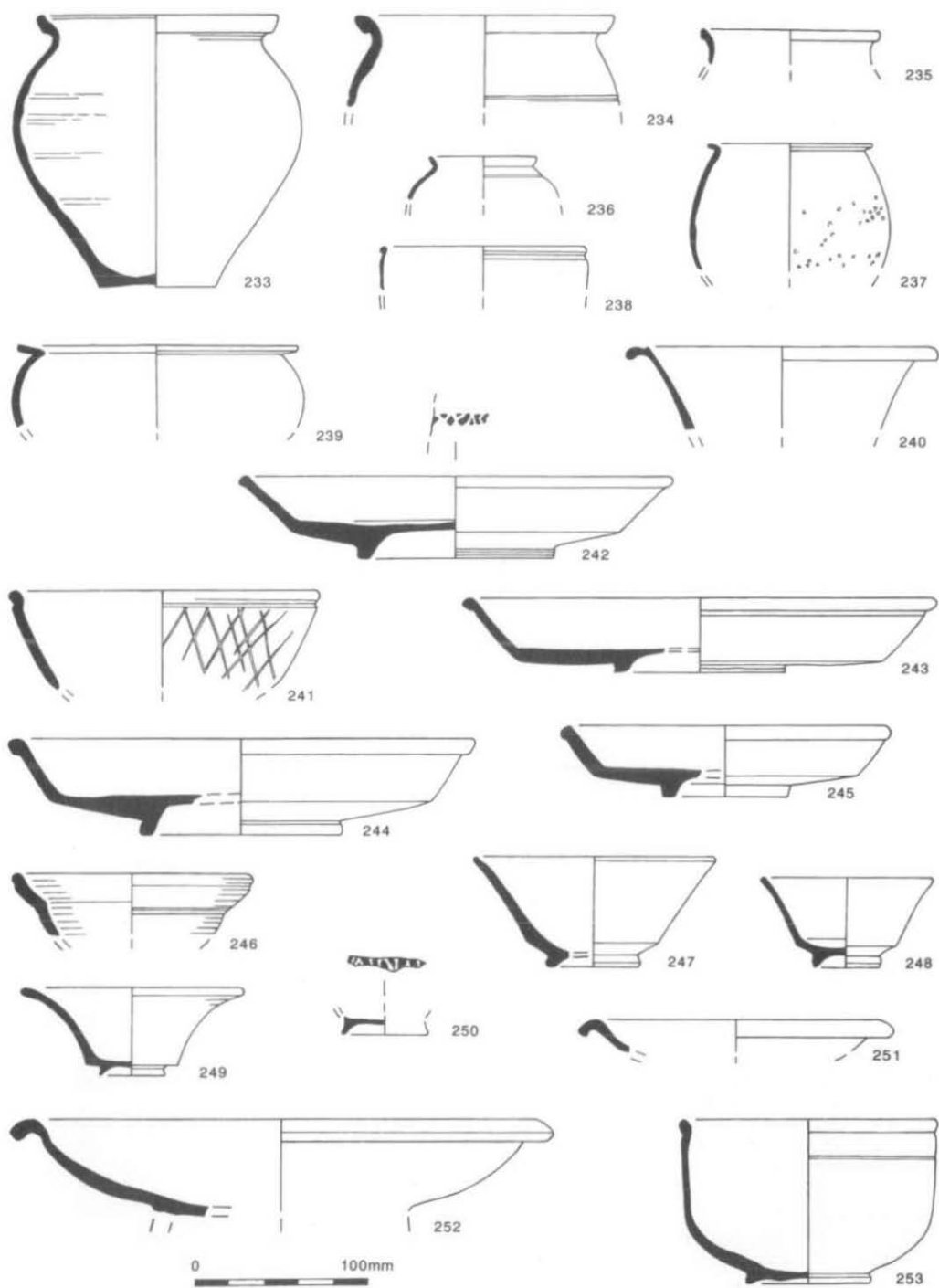


Fig. 41. Lower Farm, Nuneham Courtenay: vessels 233-253, fabric O11; scale 1:4.

(but not the detail) of the flange is, however, closer to the samian form Curle 11. The context does not help with dating.

258. Ditch fill 138/A/2. Type IA; straight sided dish with grooved, downsloping flanged rim.  
 259. Ditch fill 137/A/1. Type IA as No. 258. The type may be seen as a flanged version of O41. The context of No. 258 suggests a 2nd century date for the type, though it could have continued in use later.  
 260. Layer 207. Vertically downturned pointed rim of uncertain type. Perhaps from a large jug or jar (cf No. 30 in fabric F51, though the diameter of No. 260 is rather greater) or possibly a bowl.  
 261. Well fill 317/A/2. Omphalos footring base of a bowl presumably imitating Drag. 31.  
 262. Layer 112. Footring base of bowl or dish with stamp SO7.  
 263. Layer 302. Ridged footring base of wide ?dish form, with stamp SO2.

### *Fabric O21*

264. Pit fill 110/A/1. Type BC; flagon with simple, flaring rim and one handle. The context is late 3rd century.  
 265. Layer 112. Wide handle, presumably (but not certainly) from a flagon, with decoration of impressed circles, cf the decoration on No. 311.  
 266. Unstratified. Type EC; slightly elongated, plain bag shaped beaker. Perhaps comparable to O19.  
 267. Layer 311. Type O10. This example is of 2nd century date.  
 268. Ditch fill 137/A/1. Type O29.

### *Fabric O29*

269. Layer 112. Probably type O44.

### *Fabric R10*

#### *Stamps (including one in fabric R30)*

- SR1. Pit fill 111/B/1. Fragment of nonsense stamp on bowl or cup base.  
 SR2. Well fill 317/B/1. Nonsense stamp on base of wide dish or bowl. Fabric R30.

#### *Flagons/flasks and narrow mouthed jars*

270. Pit fill 180. Type BA; narrow necked flagon with deep groove at base and collar at top of neck and simple outcurving rim. The body form is ovoid rather than rounded. The neck and rim proportions and form are comparable to No. 225 in fabric O11. The lower body of No. 270 was partly oxidised on the exterior, so it is possible that this was intended to be an oxidised vessel. The great majority of the sherds from this context were reduced, however, so it is assumed here that a reduced product was meant. The context contained a single colour-coated sherd which, if not intrusive, indicates a mid-3rd century or later date, though some of the other contents of the group could be earlier.  
 271. Layer 311. Type R12 with panels of barbotine dot decoration.  
 272. Layer 311. Type R12.  
 273. Layer 311. Type R12.  
 274. Well fill 317/A/3. Type R12.  
 275. Ditch fill 138/A/2. Type R15?  
 276. Layer 329. Type R15.  
 277. Well fill 317/A/3. Type R15.

The distinction between R12 and R15 seems to rest largely on the fact that the rim of R12 is undercut,<sup>166</sup> whereas that of R15 is not. This criterion does not provide a meaningful distinction in the case of Nos. 271–277, since there seems to be no good reason for not regarding them as all of the same type.

#### *Jars and beakers*

278. Layer 329. Type CB; ?barrel shaped jar with thick upstanding rim. Date uncertain.  
 279. Layer 311. Type R21.

<sup>166</sup> Y, 209.

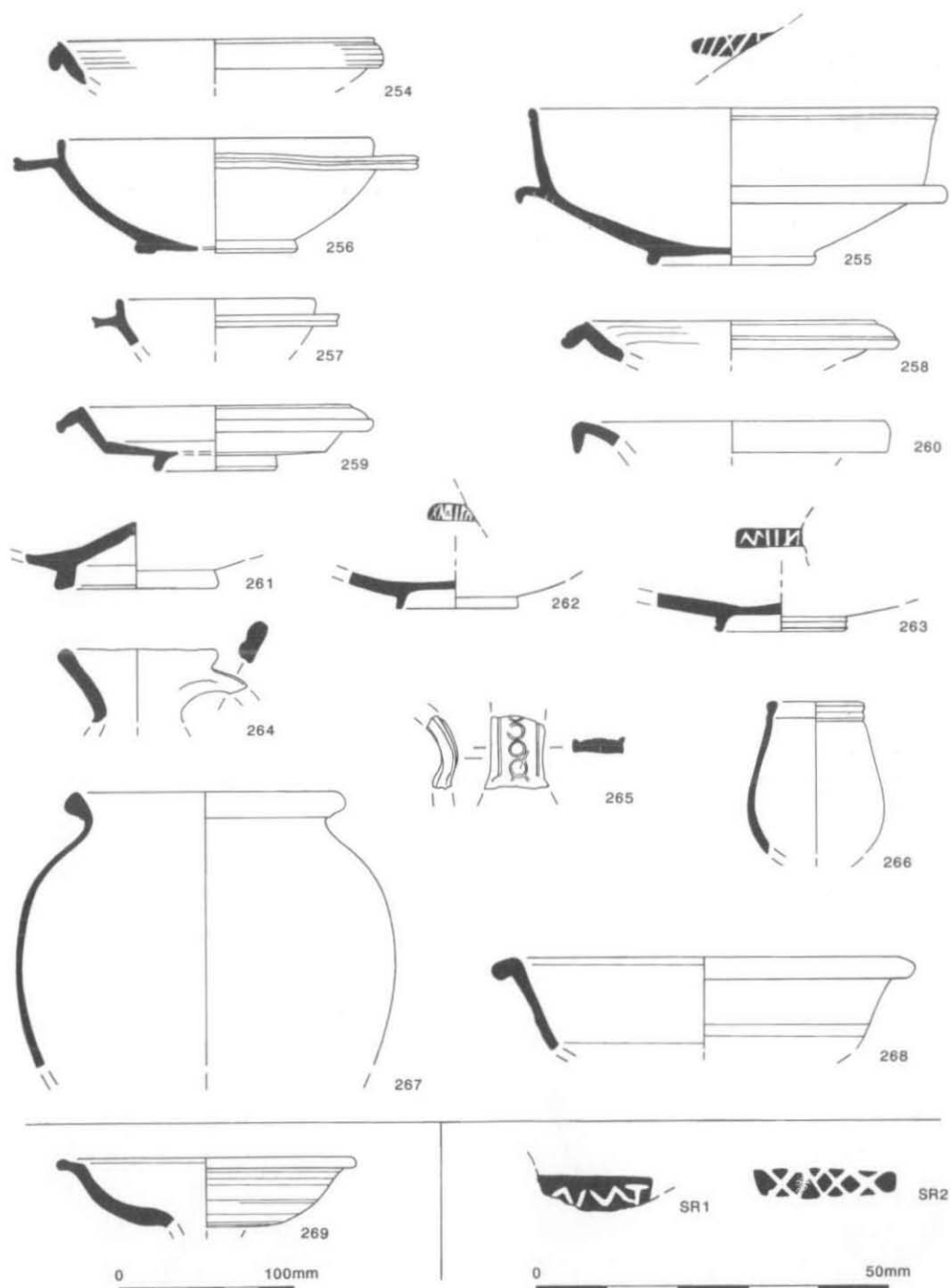


Fig. 42. Lower Farm, Nuneham Courtenay: vessels 254–269 and stamps SR1 and SR2, fabrics O11, O21, O29, R10 and R30; scale 1:4 (vessels) and 1:1 (stamps).

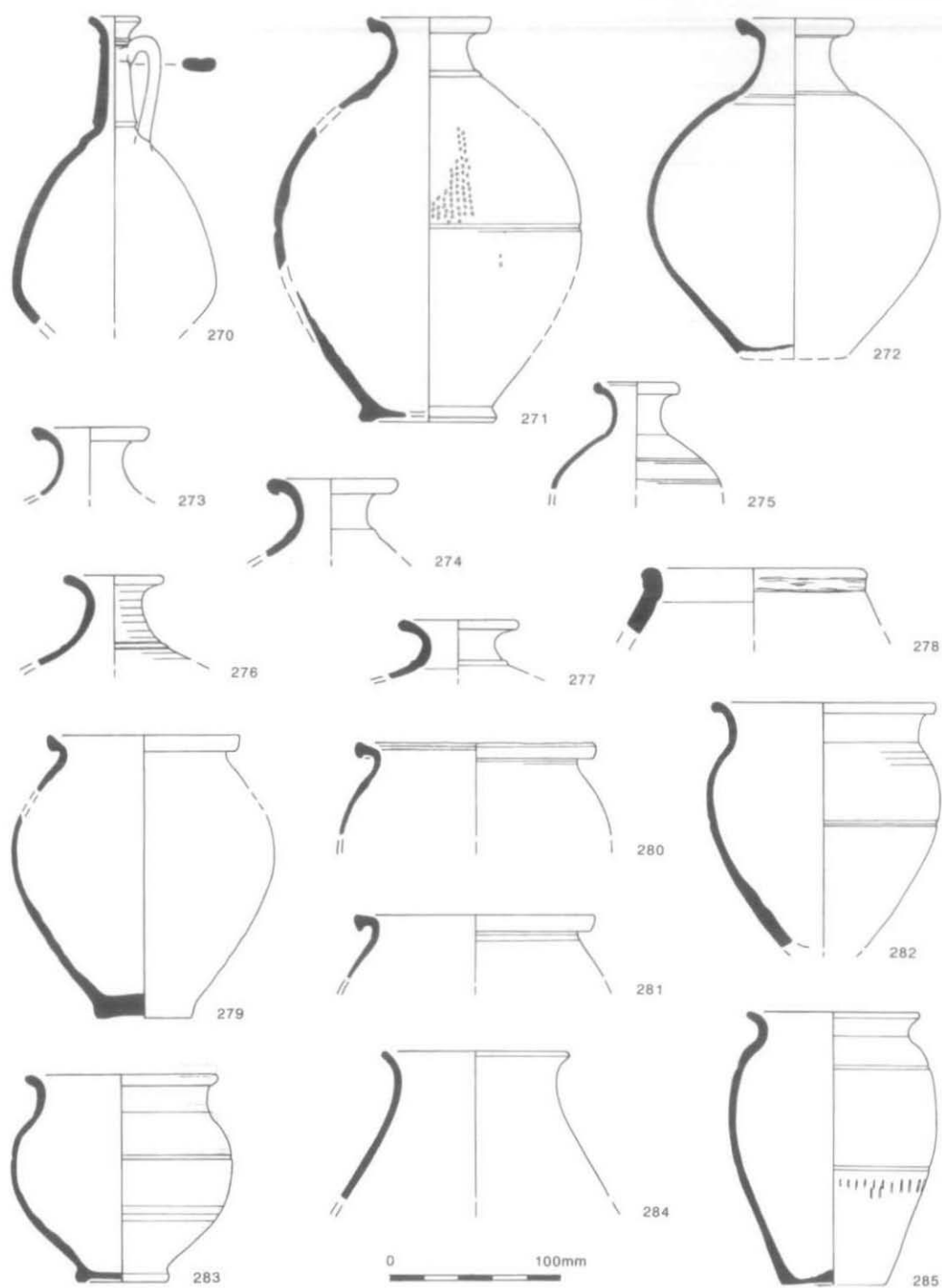


Fig. 43. Lower Farm, Nuneham Courtenay: vessels 270-285, fabric R10; scale 1:4.



280. Layer 329. Type R21.  
 281. Layer 329. Type R21.  
 282. Layer 311. Type R23.  
 283. Layer 311. Type R24.  
 284. Layer 329. Type R25.  
 285. Pit fill 180. Type R27.  
 286. Layer 329. Type R27.  
 287. Layer 329. Type CD; probable medium mouthed jar with short everted rim. It has similarities with both R21 and R31, but is not attributable to either.  
 288. Gully fill 113/A/1. Type CI; jar or possible beaker with tapered cornice-like everted rim.  
 289. Pit fill 180. Base and lower body of jar or large beaker with band of rouletted decoration at the girth.  
 290. Layer 112. Type R31.  
 291. Layer 329. Type R31.  
 292. Layer 101. Type R31.  
 293. Ditch fill 137/A/1. Type R31.  
 294. Ditch fill 137/A/1. Type R31.  
 295. Layer 329. Type R31.  
 296. Pit fill 180. Type R31.  
 297. Layer 329. Type R31 with band of rouletted decoration on shoulder.  
 298. Layer 329. Type R31 with deep zone of rouletted decoration.  
 Type R31 is given a broad definition here. Nos. 290–297 are generally consistent with Young's definition in respect of the angled everted rim, though this varies considerably in size and No. 293, with an offset beneath the rim, may be open to question. The evidence for body form suggests, however, that many of these vessels are likely to have been bag shaped rather than strictly globular.<sup>167</sup> Since none of the examples of R31 illustrated by Young has the lower part surviving it is unclear what the assumption about their form has been based on. The somewhat arbitrary distinction between e.g. Nos. 296–298 and Nos. 299–304 is made on the basis of slight nuances of rim form, the latter group having rims which are less sharply angled from the shoulder than the former group. Nevertheless many of these two groups are probably of the same basic type.  
 299. Layer 329. Type EC; bag shaped beaker with small rounded everted rim and deep zone of rouletted decoration. Nos. 298 and 299 are closely paralleled in form and decoration by vessels from an extramural pit at Dorchester-on-Thames.<sup>168</sup> The rims of the Dorchester vessels are slightly more elongated than in the pieces above, but a common source would nevertheless be possible. The Dorchester group is dated c. AD 190–230.  
 300. Layer 329. Type EC; bag shaped beaker with slightly curving everted rim and roughcast decoration.  
 301. Layer 311. Type ?EC; (presumably) bag shaped beaker as No. 300.  
 302. Layer 311. Type EC; bag shaped beaker with short rounded (almost bead-like) rim and roughcast decoration. The base is small and well-formed.  
 303. Layer 302. Type EC base with roughcast decoration.  
 304. Layer 329. Large base, presumably of type EC, with roughcast decoration.  
 The roughcast beakers may be seen either as a component of the type R31 continuum or as a separate type in their own right. The latter option is preferred here.  
 305. Layer 329. Type R34 with deep collar at the base of the neck.  
 306. Ditch fill 138/A/2. Type R34 with diamond-shaped panels of barbotine dots.  
 307. Layer 311. Type R34 as No. 306.  
 308. Layer 302/A/4. Type R34 as No. 306.  
 309. Layer 329. Type R34 as No. 306.  
 310. Layer 302. Type R35.  
 311. Layer 101. Body sherd, possibly from a beaker with vertical rows of impressed circles above a band of rouletted decoration.

*Bowls, dishes etc*

312. Layer 329. Type R38.  
 313. Ditch fill 189. Type R38.  
 314. Layer 112. Perhaps type R38.  
 315. Layer 311. Perhaps type R38.

R38 is defined principally in terms of the relationship of height to rim diameter.<sup>169</sup> This requires a large part

<sup>167</sup> Y, 217.

<sup>168</sup> Frere, *op. cit.* note 131, 170, nos. 158 and 159.

<sup>169</sup> Y, 220.

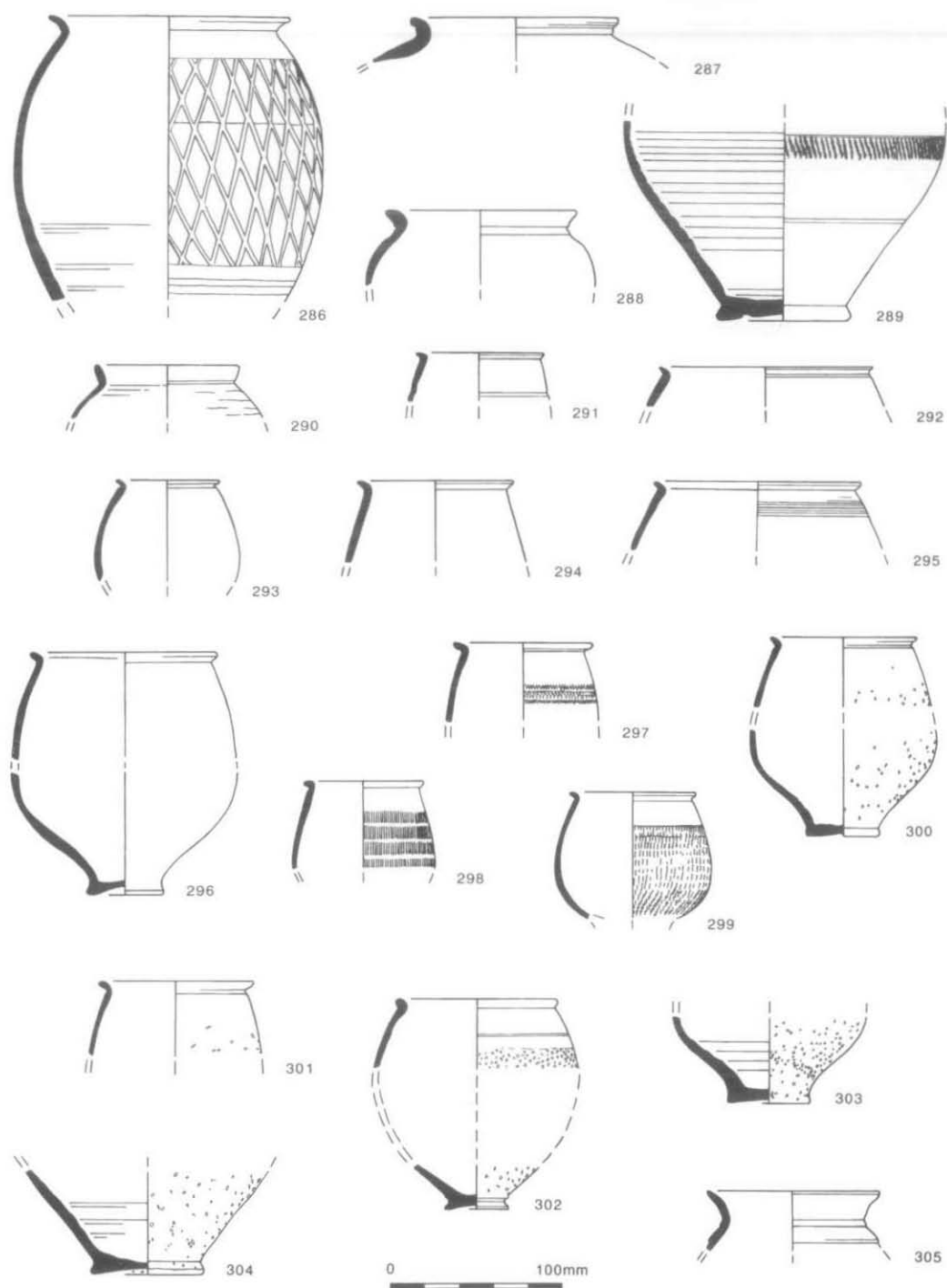


Fig. 44. Lower Farm, Nuneham Courtenay: vessels 286–305, fabric R10; scale 1:4.

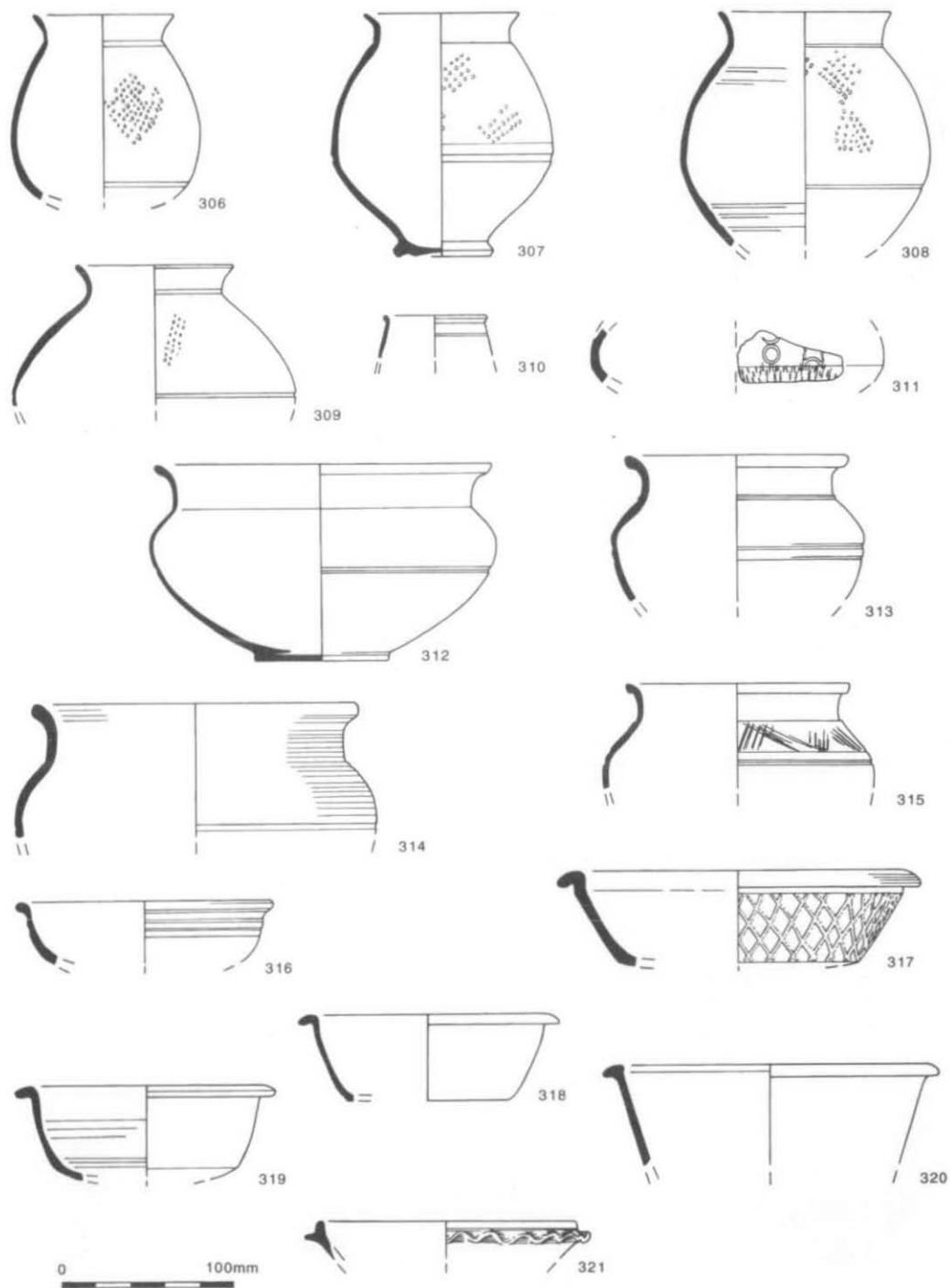


Fig. 45. Lower Farm, Nuneham Courtenay: vessels 306-321, fabric R10; scale 1:4.

- of the vessel profile to survive before identification can be certain. Nos. 314 and 315 are placed here, but could be of type R24.
316. Layer 112. Type R41.
317. Ditch fill 137/A/1. Type R43.
318. Layer 311. Type R43.
319. Layer 329. Type R43.
320. Layer 329. Type R44.
321. Layer 329. Type H; bowl or dish probably as R47 but with frilled flange.
322. Ditch fill 137/A/1. Type R48.
323. Layers 107 and 112. Type JB; curving sided dish, rather like R48.2 without the flange. This vessel is presumably related to the straight sided type R53. A 4th century date is likely.
324. Pit fill 110/A/1. Type R56.
325. Layer 112. Type R56.
326. Layer 112. Type R56.
327. Ditch fill 138/A/1. Type R60 variant without beaded tip to rim.
328. Layer 112. Type R60.
329. Unstratified. Shallow footring base, probably of type R60.
330. Layer 107. Type R62.
331. Layer 103. Type R64.
332. Layer 112. Type R64, with angularly drawn combed pendent semicircle decoration, presumably intended to imitate the compass drawn representations of ovolos found on London-type bowls. The ancestry of Nos. 331 and 332, as with some other examples of type R64 (e.g. R64.1 and R64.2), may owe as much to Drag. 29 as to 30.<sup>170</sup>
333. Trench 1 unstratified. Body sherd of type R64. The decorative scheme consists of triangle and diamond shapes defined by deeply incised lines. The triangles are filled with barbotine dots and the one surviving substantially complete diamond contains a barbotine bird (the head is missing). The use of triangular dot-filled panels is seen at Dorchester-on-Thames, where, however, the lines are also of barbotine.<sup>171</sup> Barbotine bird motifs have been noted on other 'London type' grey wares, for example at Derby;<sup>172</sup> and in Warwickshire at Tripontium<sup>173</sup> and Tiddington.<sup>174</sup> None of these exactly parallels the Lower Farm piece. The source of the fine reduced fabric on which the Warwickshire examples occur is unknown, but is unlikely to be the Oxfordshire kilns.
334. Layer 311. Type R65.
335. Ditch fill 189. Type R65.
336. Layer 112. Type R67.
337. Layer 107. Type R68, with irregular groups of oblique burnished lines on the upper body wall.
338. Gully fill 160/A/1. Type R70.
339. Layer 112. Type R70.
340. Layer 329. Type JB; curving-sided dish with overhanging rim, perhaps type R71.
341. Layer 112. Type JA; straight-sided dish with curving flanged rim and slight internal bead. It would have had a footring base. This vessel blends elements of a number of Oxfordshire types, such as R46.1, R60 and R70/71. A 2nd century date is likely, but not proven on present evidence.
342. Layer 329. Type R72, the rim being slightly more curved than in Young's example. There seems to be no good reason to invoke a metal prototype for this form. Unfortunately the context of the Lower Farm vessel is a mixed one, containing both early and late material. The grey wares in this group are, however, generally earlier rather than later and a 2nd century date for this vessel is tentatively preferred here.
343. Layer 107. Type R76, cf particularly R76.3.

### *Fabric R20*

344. Well fill 317/B/1. Type R53.

<sup>170</sup> Y, 224-5.

<sup>171</sup> Frere, *op. cit.* note 131, 157-8, no. 22.

<sup>172</sup> J. Dool, 'Derby Racecourse: Excavations on the Roman Industrial Settlement, 1974', *Derbyshire Archaeol. Jnl.*, 105 (1985), 189-91, no. 32.

<sup>173</sup> Unpublished.

<sup>174</sup> Two examples in P. Booth forthcoming, 'The Pottery', in N. Palmer, 'Excavations at Tiddington, near Stratford upon Avon'.

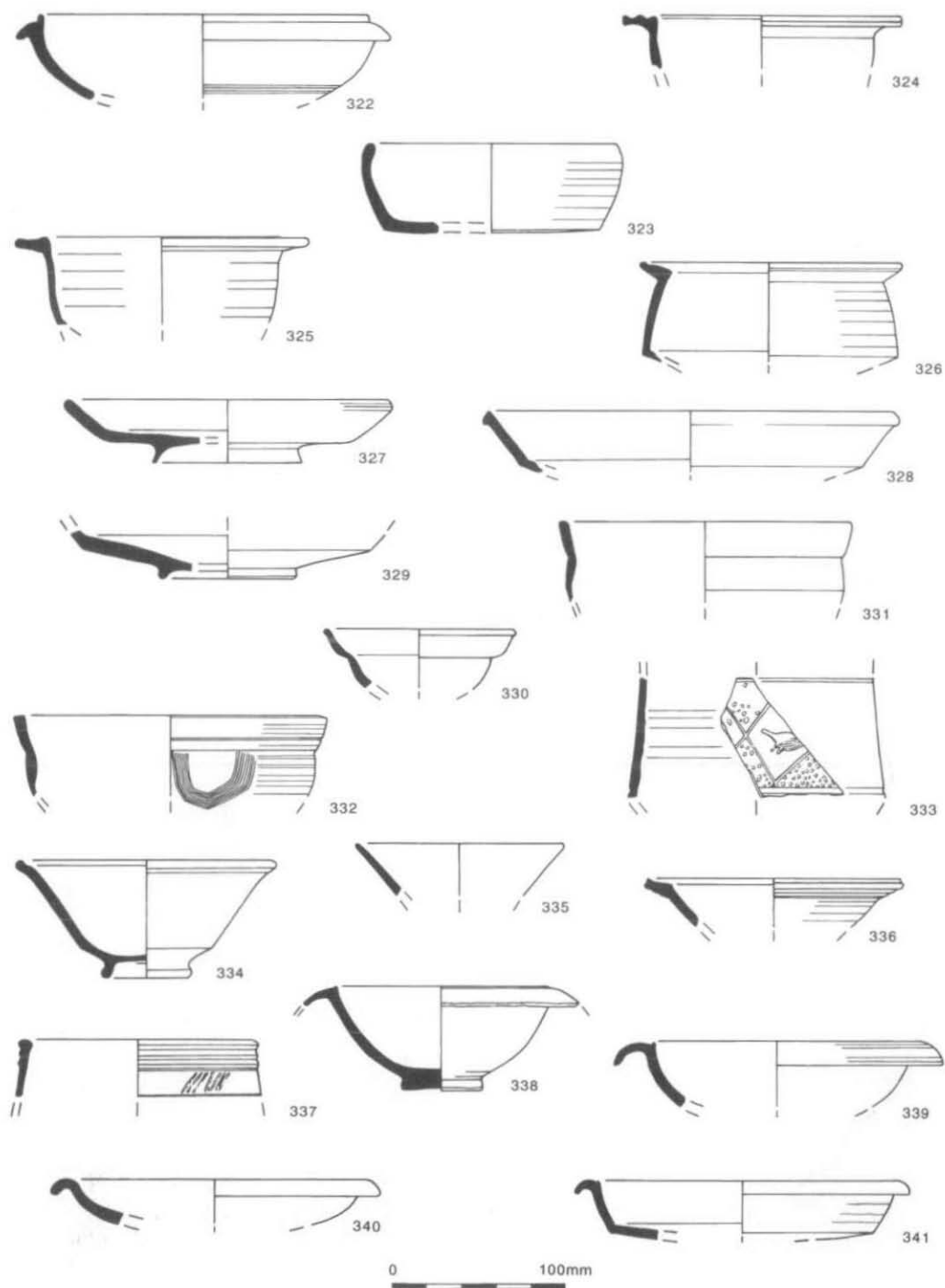


Fig. 46. Lower Farm, Nuneham Courtenay: vessels 322-341, fabric R10; scale 1:4.

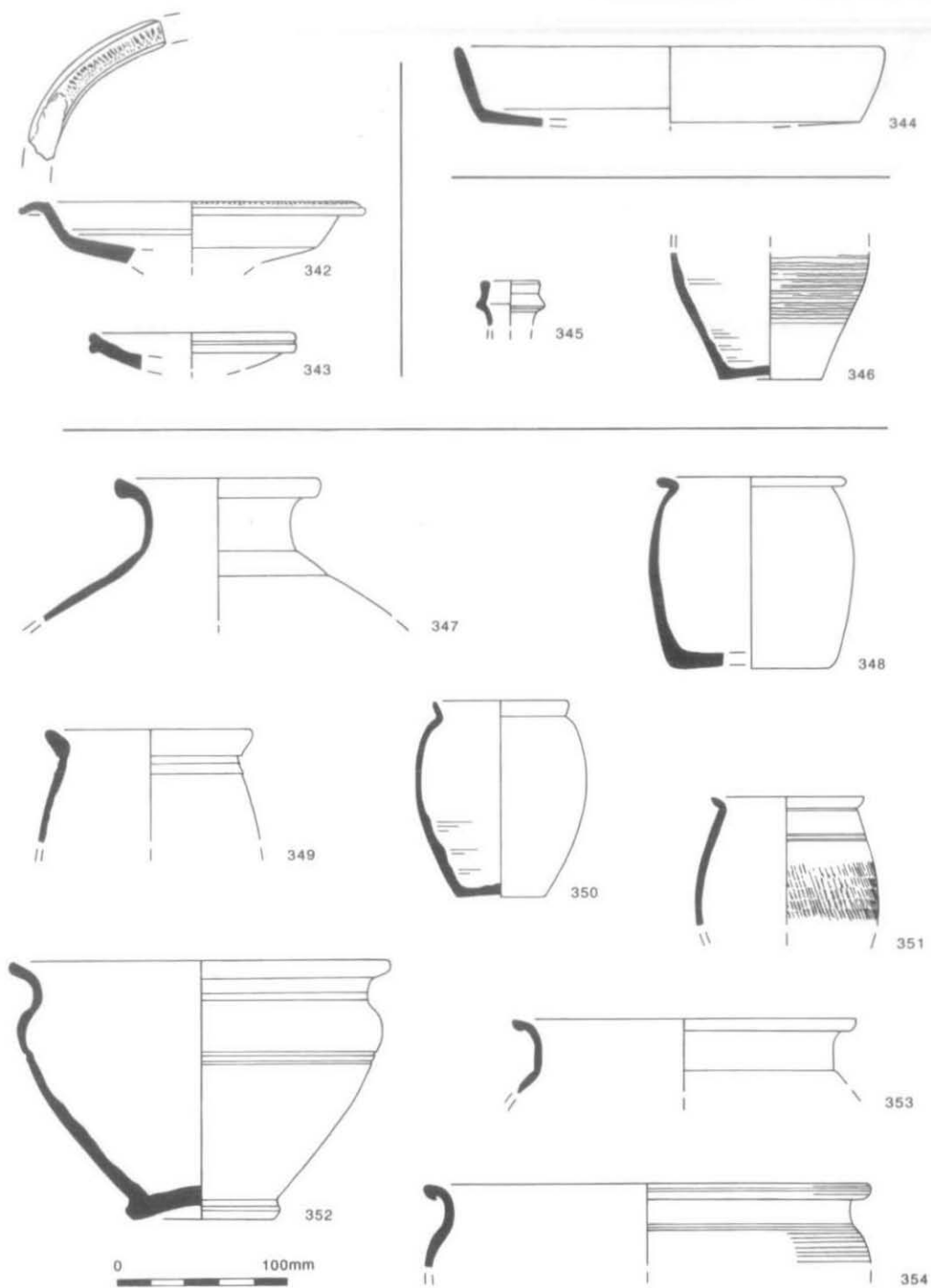


Fig. 47. Lower Farm, Nuneham Courtenay: vessels 342–354, fabrics R10, R20, R29 and R30; scale 1:4.

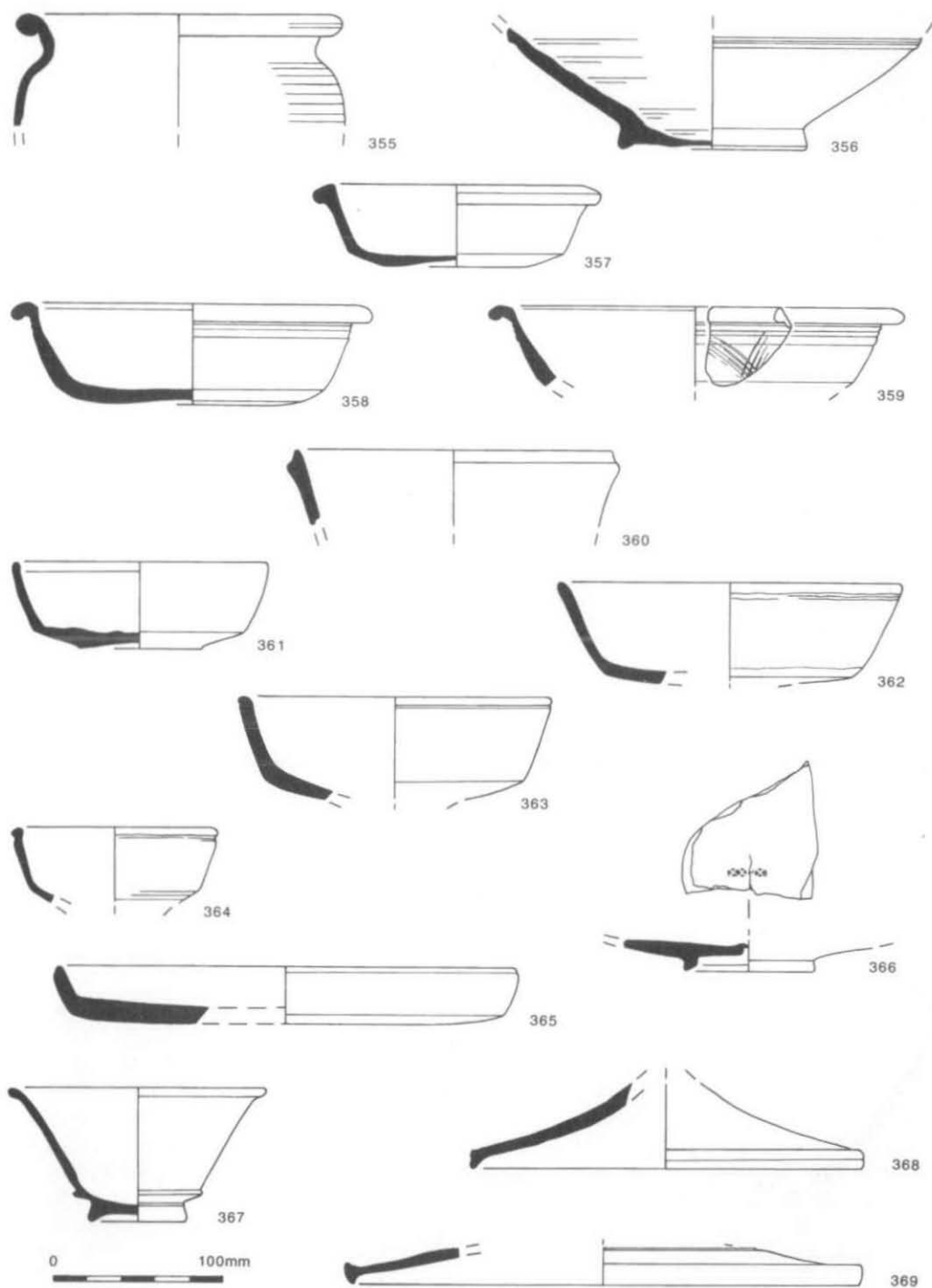


Fig. 48. Lower Farm, Nunham Courtenay: vessels 355-369, fabric R30; scale 1:4.

*Fabric R29*

345. Layer 108. Type cf R1. The form is also reminiscent of No. 212 in fabric Q21. The layer from which this piece comes is a mixed one, but the vast bulk of the material is probably datable to the late 3rd century. This would be consistent with the dating suggested by Young.<sup>175</sup> The similarity of this type to an Alice Holt flagon type has been noted above.
346. Layer 302/B/2. Base of jar with a heavily rilled body. A 4th century date is likely.

*Fabric R30*

347. Layer 311. Type R15.
348. Layer 302/A/4. Type R21, with an unusually wide base. This vessel does not, however, appear to be a distorted waster or second.
349. Layer 302. Type R23.
350. Layer 314. Type R28 with a taller rim than Young's example. Perhaps a hybrid of R27 and R28.
351. Well fill 317/B/1. Type R31 (cf Nos. 298–299 above) with deep zone of rouletted decoration.
352. Ditch fills 138/A/1 and 138/A/2. Type R38.
353. Layer 311. Type R38.
354. Well fill 317/A/4. Type R38.
355. Well fill 317/A/4. Type R38.
- The comments on Nos. 312–315 above apply equally to these vessels.
356. Layer 329. Large base with shallow footing and prominent cordon on lower body. Probably from a jar or necked bowl such as R38.
357. Layer 311. Type R43.
358. Layer 302. Type R43.
359. Layer 329. Type R43 with curvilinear lattice or multiple interlocking arc decoration.
360. Layer 329. Type R47, with only a very slight flange.
361. Layer 311. Type R51.
362. Layer 302. Type R52.
363. Layer 329. Type R52.
364. Layer 311. Type R52.
365. Layer 329. Type R53.
366. Well fill 317/B/1. Straight footing base of shallow bowl or dish, cf eg R60, with stamp SR2.
367. Layer 329. Type R65, with outflaring rim and prominent moulding at the base of the body wall.
368. Well fill 317/B/1. Type R76.
369. ?Layer 313. Type R76.

**DISCUSSION**, by G.D. KEEVILL

## THE EXCAVATED SEQUENCE AND THE GEOPHYSICAL SURVEY

The excavations produced a limited amount of evidence for prehistoric activity, in the form of flintwork, a polished axe fragment, and Iron Age pottery. Unfortunately the flintwork did not include diagnostic pieces, although a Neolithic date is possible; this would certainly correlate with the axe fragment. All of the stratified material, however, occurred in Roman contexts.

The geophysical survey revealed three annular anomalies close together in the N.E. corner of the survey area (Fig. 22). The features have approximate diameters of 10 m, 13 m, and 17.5 m. The middle of the three (both physically and in size) is roughly ovoid in plan. It seems reasonable to regard these as prehistoric ring ditches, although excavation would be necessary to confirm this. Similarly the function of the features cannot be determined on the available evidence.

<sup>175</sup> Y, 208.



Despite the very limited evidence for Iron Age features, the pottery was relatively unabraded and of a reasonable average sherd size (15.9 g). This suggests that most derived from deposits containing occupation debris rather than manuring scatters or similar deposits. A settlement on or very close to the present site is indicated. The relative absence, even amongst the later Roman pottery, of characteristic late Iron Age-early Roman material<sup>176</sup> as seen at Dorchester or Abingdon might suggest that this settlement did not continue in use into the early Roman period.

Early Roman features were limited to a number of linear features, a cluster of postholes N. of Area 1, and parts of the pot dump. Later Roman contexts occurred throughout the excavation area, suggesting that activity intensified into the 3rd century. Comparison of the excavated and geophysical survey data produces interesting results, in that the phasing of Roman excavated features appears to be reflected in the survey plot. Clearly one must always exercise caution when comparing two-dimensional survey evidence with four-dimensional excavation results (i.e. the three physical dimensions plus time), but the relationship is worthy of note in this instance.

Figure 49 is an interpretative plot of the linear features from the geophysical survey data, showing the enclosures and positions of kilns.<sup>177</sup> Excavated ditches and gullies corresponding to the geophysical features are also shown.<sup>178</sup> The early Roman ditch 137 appears to correspond with a geophysical feature which turns sharply southward to the W. of the excavation trench and is therefore on a distinctively different alignment to the enclosures. Later Roman ditches 185-6, 139<sup>179</sup> and 309 correspond to geophysical features forming the main body of the enclosures. Later Roman gully 128 can be followed westward as a feature which continues beyond the limit of the enclosures.

It can be suggested, therefore, that the geophysical survey depicts two distinct phases of Roman activity. The first consists of a small early Roman enclosure. The second comprises a larger and more extensive system of rectilinear enclosures and trackways. It seems likely that this system continued to the E.; the trackway along the E. side of the enclosures is associated with further possible enclosures running eastwards beyond the limits of the survey. It should be noted that pottery was found in the arable field E. of the excavations in the 1960s.<sup>180</sup> It is possible that the later enclosures reused elements of the earlier system.

#### THE CHARACTER OF THE SITE IN THE ROMAN PERIOD

The limited number of early Roman features makes it difficult to interpret the function of the site in Phase I. One can suggest that there was a domestic element, perhaps starting in the late 1st century AD, but the ceramic evidence indicates that pottery production was under way from the late 1st or very early 2nd century AD. Production may have been on a relatively small scale at first, but by the 3rd century the site was flourishing. This is demonstrated not only by the number of contexts for each of the two phases of activity, but also by the relative quantities of earlier and later pottery irrespective of context.

The internal dynamics of the Phase II enclosures can be examined in some detail, within the constraints imposed by the limitations of the evidence. Ditches 185 and 186 at the N.

<sup>176</sup> Five sherds assigned to the E ware category might be of this type.

<sup>177</sup> The degree of confidence in their identification is generally very high, although one or two may be pits filled with magnetically enhanced material such as kiln debris.

<sup>178</sup> Features terminating within the excavation trench or areas are not shown. See Figures 13-16.

<sup>179</sup> No dating evidence was recovered from feature 140.

<sup>180</sup> *Op. cit.* note 48.

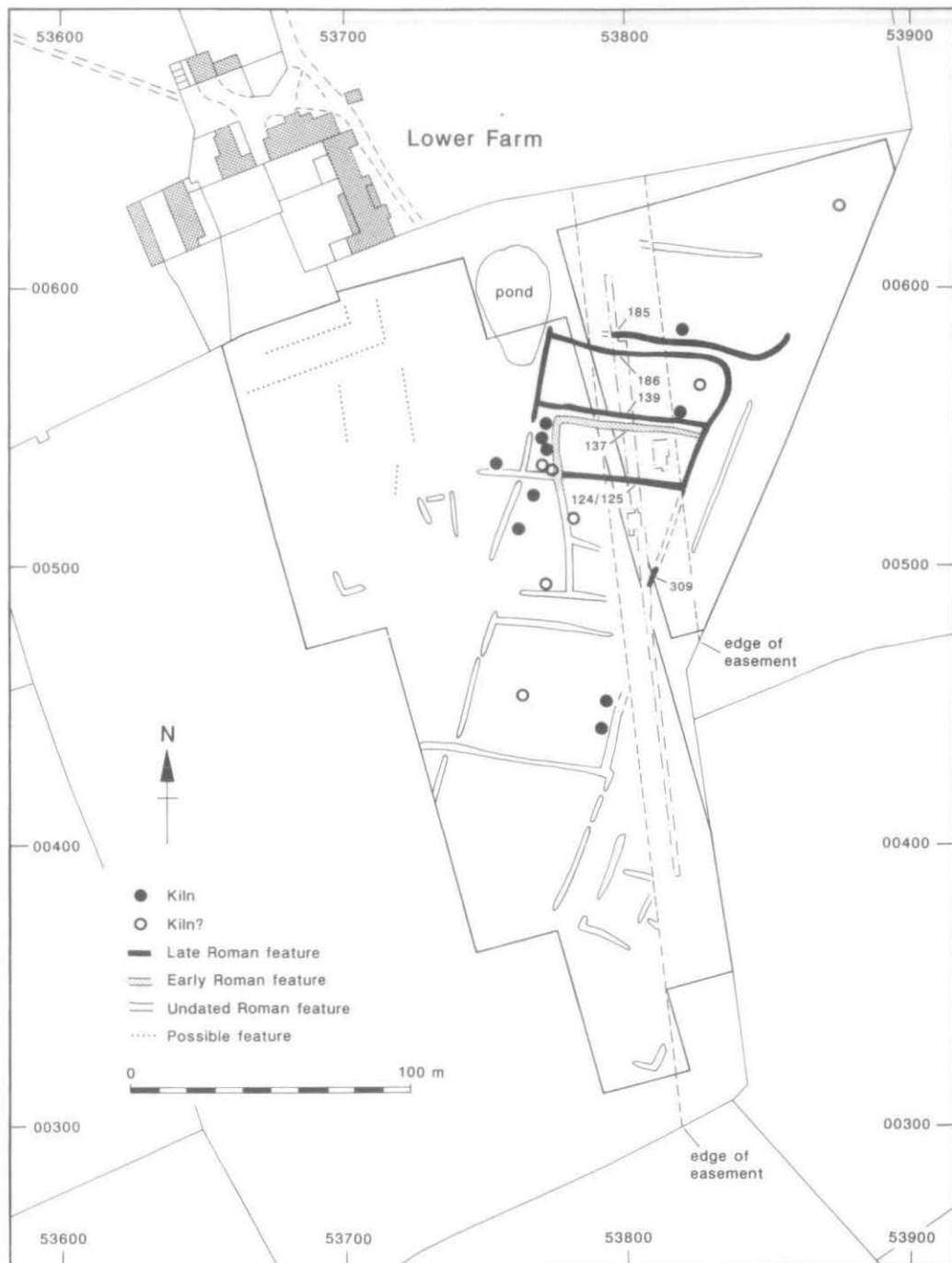


Fig. 49. Lower Farm, Nuncham Courtenay; interpretative plan showing the correlation of excavation and geophysical survey results.

end of the excavation, and their corresponding geophysical features, form the N. side of a rectangular enclosure; ditch 139 represents its S. side. It appears to be the domestic area of the site. Two arcs of postholes were found in this area, and these are interpreted as parts of timber-built round houses.

The area to the S. of the domestic enclosure was characterised by features associated with pottery production, and has been interpreted as a workshop area. This extends at least to well 317, and possibly as far as ditch terminus 309 which probably represents the E. side of the enclosure system (see Fig. 49). The most significant features are the clay chest, the stone-filled pits, and the well. Clay chests virtually identical in form to feature 175 were found on the Churchill Hospital kiln site.<sup>181</sup> The exact purpose of the features is unknown, but all were filled with clay, usually incorporating some sherds of pottery. Young points to similar features on kiln sites in the Nene Valley, at Brockley Hill, and at Mancetter.<sup>182</sup>

The shallow stone-filled pits in Areas 1 and 2 are difficult to interpret. Young lists two feature types associated with pottery manufacture which are similar in some details to the Lower Farm features. Firstly, there are a few examples of stone platforms from Oxfordshire kiln sites. These comprise a layer of flat stones overlaid with a thin deposit of puddled clay.<sup>183</sup> The original published descriptions of these features is not entirely helpful, but the Cowley one appears to have been built straight onto the ground,<sup>184</sup> while the Dorchester example is called a platform laid on the natural gravel, 'here about 2 feet below the surface'.<sup>185</sup> It is just conceivable that this represented the lining of a cut feature, but on balance the Lower Farm features are in any case different in that they do not have a layer of puddled clay on the surface.

The alternative interpretation is that the shallow pits represent pot-drying features. Young lists several types of these features, ranging from classic T-shaped dryers to much more amorphous features.<sup>186</sup> Most of these have stone linings of some sort, and they appear to offer the best parallels for the larger of the Lower Farm features at least. It is conceivable that some of the smaller features acted as stoke-holes for the larger pits.

No buildings could be identified within the workshop area. The postholes in Areas 1 and 2 may be structural, but they cannot be interpreted meaningfully. The curving gully 113-131-118 in Area 1 is broadly analogous with the workshop building in Complex D at the Churchill Hospital,<sup>187</sup> and it is conceivable that the undated ditch 195 was associated with the gully. Examination of the plan of Area 1, however (Fig. 15 and see Fig. 19), shows that the gully is cut by several of the pot dryers. Nevertheless the gully contained mid-late Roman pottery, and it therefore belongs firmly in Phase II.

The well, 317, is a typical find on kiln sites.<sup>188</sup> The need for water during the pot forming process is obvious, and the location of the well at the S. end of the concentration of pottery production features is unlikely to be accidental. The substantial assemblage of pottery from the well - albeit representing secondary backfilling - suggests that it was being used as an alternative to the dump for discarding unmarketable products. Presumably the well would also have been used for purely domestic purposes.

<sup>181</sup> Y, 17-18.

<sup>182</sup> Y, 18.

<sup>183</sup> Y, 18-19.

<sup>184</sup> R.J.C. Atkinson, 'A Romano-British Potters' Field at Cowley, Oxon.', *Oxoniensia*, vi (1941), 13-14.

<sup>185</sup> *Oxoniensia* ii (1937), 201.

<sup>186</sup> Y, 20-3 and Fig. 5.

<sup>187</sup> Y, 26-8, and Fig. 7A. See also C.J. Young, 'Excavations at the Churchill Hospital, 1972: Interim Report', *Oxoniensia*, xxxviii (1973), 211-12, and Fig. 2.

<sup>188</sup> Y, 16.

The pot dump seems to be an exceptional feature in the Oxfordshire industry in terms of its sheer scale, both in chronological and physical terms. The former point is important, because it shows that pottery was being produced and discarded virtually throughout the life of the site. The dumping appears to have been highly localised during the earlier production, when discrete tips such as 311 were laid down. This is consistent with findings at Cowley<sup>189</sup> and the Churchill Hospital.<sup>190</sup> The later dumping, however, seems to have been on a vast scale, and to have been more organised than at other sites. At the Churchill Hospital, for instance, four Phase I kilns which lay in a row at Site II (Complex A)<sup>191</sup> were backfilled with kiln debris and wasters as each went out of use and a new kiln was built.<sup>192</sup> The Phase II kilns, however, were typically surrounded by waster tips.<sup>193</sup> The Lower Farm pot dump covered an area of approximately 80 m N.-S. by at least 15 m,<sup>194</sup> and casual collection of pottery from the arable field immediately to the E. in 1992 suggests that the dump may extend further to the E.; it is hoped that this can be tested by further fieldwork in 1993 or 1994.

The close correlation of kilns and waster dumps at the Churchill Hospital can also be seen in other Roman pottery industries. The Alice Holt potteries, for instance usually had waster dumps accumulating around the kilns.<sup>195</sup> At the Alice Holt kiln site itself, approximately 80 dumps lay within an area of some 1 km (N.-S.) × 750 m. The area is heavily wooded, so that most of the dumps have not been subjected to plough damage. They range considerably in size, from *c.* 5 m across upwards, with a typical breadth of *c.* 10 m. The largest, however, are 50 m–60 m across and up to 1.5 m high. These are analogous in size to the Lower Farm dump, but they represent less systematic accumulation around kilns<sup>196</sup> compared to the apparently deliberate selection of one area for mass disposal at Lower Farm. A direct relationship between kilns and dumps has also been noted in the New Forest Roman potteries, where kilns may even be found underneath waster heaps.<sup>197</sup> The possibility that kilns may underlie the Lower Farm pot dump cannot be ruled out, of course, without much more extensive fieldwork. Similarly the assumption that the dump is the only one on the site necessarily rests on incomplete evidence.

The later dumping at Lower Farm not only seems to have been more extensive, but also more generalised. The discrete tipping in small areas was supplanted by wholesale spreading of pottery across a wide area. Complete pots or substantial parts (whether broken or not) were more rare, but by the same token sherds were very liberally spread throughout the soil matrix. The size of the dump implies the discard of pottery on a very large scale, and presumably an equivalently large scale of production to generate such waste.

The dump is not immediately apparent on the geophysical survey. The feature should display a strong positive trace as it contained very large amounts of magnetically enhanced material such as kiln debris and pottery. It is possible that the S. extent of the survey fortuitously skirted around the W. edge of the dump. Alternatively, the main dump deposits may have lain slightly too deep below the surface to have responded well to the survey. This

<sup>189</sup> Atkinson, *op. cit.* note, 13–14.

<sup>190</sup> C.J. Young, 'Excavations at the Churchill Hospital, 1971: Interim Report', *Oxonienia*, xxxvii (1972), 18–21, and Fig. 1.

<sup>191</sup> Y, Fig. 11.

<sup>192</sup> Young, *op. cit.* note 190, 17–18.

<sup>193</sup> *Ibid.*, 18–19.

<sup>194</sup> *i.e.*, the width from the excavation trench to the pipe trench dug along the E. side of the easement from which large quantities of pottery were recovered.

<sup>195</sup> Lyne and Jefferies, *op. cit.* note 109, 13.

<sup>196</sup> *Ibid.*, 5–9, Fig. 2.

<sup>197</sup> M.G. Fulford, *New Forest Roman Pottery*, BAR 17 (1975), 10.

seems unlikely, however, and the former explanation is preferred. It will also be noted that the linear anomaly forming the E. side of a probable track along the E. side of the enclosures can be traced on either side of the easement in the survey. If this feature continued across the easement – and it must be admitted that there was no obvious equivalent feature in the excavation, although this could be an accident of the trench location – the pot dump would lie on its E. side.

No kilns were found in the excavation, although pit 306, sealed by the latest layers of the pot dump, contained much burnt limestone and charcoal in its fill. The feature was not fully exposed in the excavation. It is just conceivable that this was an extremely simple kiln, analogous to Young's type 1.<sup>198</sup> This seems unlikely, however, especially as the comparable features from the Churchill Hospital appear to have been of 1st century date.<sup>199</sup> Pit 306 only contained three small pot sherds, but one of these was a late 3rd century colour-coated mortarium fragment. The pit may be interpreted best as the stoke-hole to a pot-dryer.<sup>200</sup> It lay within a cluster of features, most of which could not be ascribed to a function due to the limited exposure within the pipe trench. Pit 306 lay 30 m N. of the stone spread 307, interstratified at the top of the pot dump. 307 is analogous with a number of stone spreads at the Churchill Hospital, and at a minimum level may be interpreted as a floor. It is difficult to ascribe a specific function beyond this, however, as the stones were not associated with clay deposits. It was covered by an especially charcoal-rich lens within the pot dump.

The fired clay can be separated into sand-tempered pieces derived from the permanent parts of the kiln structures, and grass and straw-tempered pieces which probably represent the less permanent superstructural components. Sand-tempered fragments were more common in Area 2 than grass/straw tempered ones; this was the only part of the site where this pattern was observed. It is possible that this area was close to one or more kilns.

The presence of kiln structures has been confirmed by the results of the geophysical survey (see Figs. 22 and 49). This identified a concentration of very strong positive anomalies surrounded by equally strong negative readings, a characteristic geophysical footprint of kilns. Some anomalies which are not quite as strong could be either kilns or other features such as pits filled with magnetically enhanced material. Augering of two suspected kilns produced large quantities of fired clay, charcoal-enriched soil and pottery sherds at a depth of 0.4 m–1.4 m. It is likely that the presence of a number of kilns remains unconfirmed because they were obscured by topsoil dumps on the easement.

The kilns mostly lie in groups, with a few isolated examples including some close to excavation Area 2 (see above). It is not possible, of course, to determine whether there is any chronological factor to this distribution. The main concentration of kilns occurs in a row immediately inside the ditch bounding the W. side of the later Roman enclosures. A second row of kilns lies in the middle of the survey area immediately to the W. of the easement. No kilns are apparent in the immediate vicinity of the pot dump, although this could be a consequence of the survey location.

The linear arrangement of kilns is strongly reminiscent of Site II at the Churchill Hospital.<sup>201</sup> The excavations at the Churchill Hospital also uncovered numerous ditches and gullies, some of which appear to represent enclosures. The relationship of these to the kiln activity is unclear, however, and published plans show that at least two kilns were cut into the ditches.<sup>202</sup> The plans in Young's corpus indicate that the kiln activity was unenclosed,

<sup>198</sup> Y, 31, and Fig. 8, 1.

<sup>199</sup> Ibid.

<sup>200</sup> Y, 20–3.

<sup>201</sup> Young, *op. cit.* note 190, 17, Fig. 1. Also Y, 44–50, Fig. 11.

<sup>202</sup> C.J. Young, 'Excavations at the Churchill Hospital, 1973: Interim Report', *Oxoniensia*, xxxix (1974), Fig. 1.

although organisation into discrete areas is nevertheless apparent.<sup>203</sup> At Longthorpe, near Water Newton, Northants, several kilns were aligned along the outside of a ditch defining the limit of two conjoined late Iron Age enclosures.<sup>204</sup> Elsewhere the relationship of kilns, whether singly or in groups, to ditches and enclosures has often been noted.<sup>205</sup>

The excavations and geophysical survey have produced one of the most detailed plans of an Oxfordshire Roman kiln site to date. Two phases of activity have been identified, and it is suggested that the first phase took place on a relatively small scale within a sub-rectangular enclosure. The later activity was on a much larger scale and occurred within a complex of enclosures and trackways. Distinct zones of activity were apparent, and the geophysical survey located numerous kilns. Others are likely to lie within the pipeline easement, while the site also seems to extend eastwards into the arable fields.

Only the Churchill Hospital excavations provide comparable data. The Lower Farm site differs from the latter in that the preparation and production of pottery occurred within enclosures throughout its life. Ditches and enclosures were present at the Churchill Hospital, but these appear to be unconnected with the production site.<sup>206</sup> The two sites are similar, however, in the separation of the preparation and production processes. At the Churchill Hospital, the workshops were at least 15 m away from the kilns in three of the four complexes (A, C and D).<sup>207</sup> The distinction was equally deliberate at Lower Farm, where the workshop area lay in the centre of an enclosure while the kilns were ranged along its edges.<sup>208</sup>

#### THE LOCATION OF THE SITE (Fig. 50)

Lower Farm lies in between the major concentration of kilns on the S. and E. sides of Oxford and the smaller group around and N. of Dorchester-on-Thames.<sup>209</sup> One could see Lower Farm as an outlier to either of these, but the location of the new site could equally negate the accepted distinction into two groups. The volume of production implied at Lower Farm certainly makes it difficult to see the site as peripheral in any sense. It seems more reasonable to regard the distribution of kilns as part of a continuum along the road from Alchester to Dorchester. It is notable that most of the sites lie between the road and the Thames.

Two factors must have been critical in choosing a site for pottery production: the availability of materials, and access to markets. Lower Farm is reasonably well placed for raw materials. Clay is readily available in the immediate vicinity, and the greensand outcrop at Nuneham Courtenay would have been vital as a source of grits for mortaria production. Beyond this, the relative proportions of production of white wares and white-slipped wares is significant. The more northerly sites exploited the white-firing clay available at Shotover Hill to produce white wares,<sup>210</sup> while the southerly sites such as Baldon and Allen's Pit produced white-slipped wares in imitation because the white-firing clay was much less accessible to them.<sup>211</sup> The Lower Farm pottery largely confirms this.

<sup>203</sup> Y, 46–50 Figs. 11 and 12.

<sup>204</sup> G.B. Dannell and J.P. Wild, *Longthorpe II: the Military Works Depot: an Episode in Landscape History*, Britannia Monograph 8 (1987), Fig. 4.

<sup>205</sup> Swan, op. cit. note 62, 49–50.

<sup>206</sup> See Young, op. cit. note 202, 8–10.

<sup>207</sup> Y, 46–50, Figs. 11 and 12.

<sup>208</sup> The lack of a chronological dimension to the survey means that the relationship of the more isolated kilns to the workshop enclosure cannot be determined.

<sup>209</sup> cf. Y, 12–13.

<sup>210</sup> Y, 12, 232–9.

<sup>211</sup> Y, 12, 236–9.

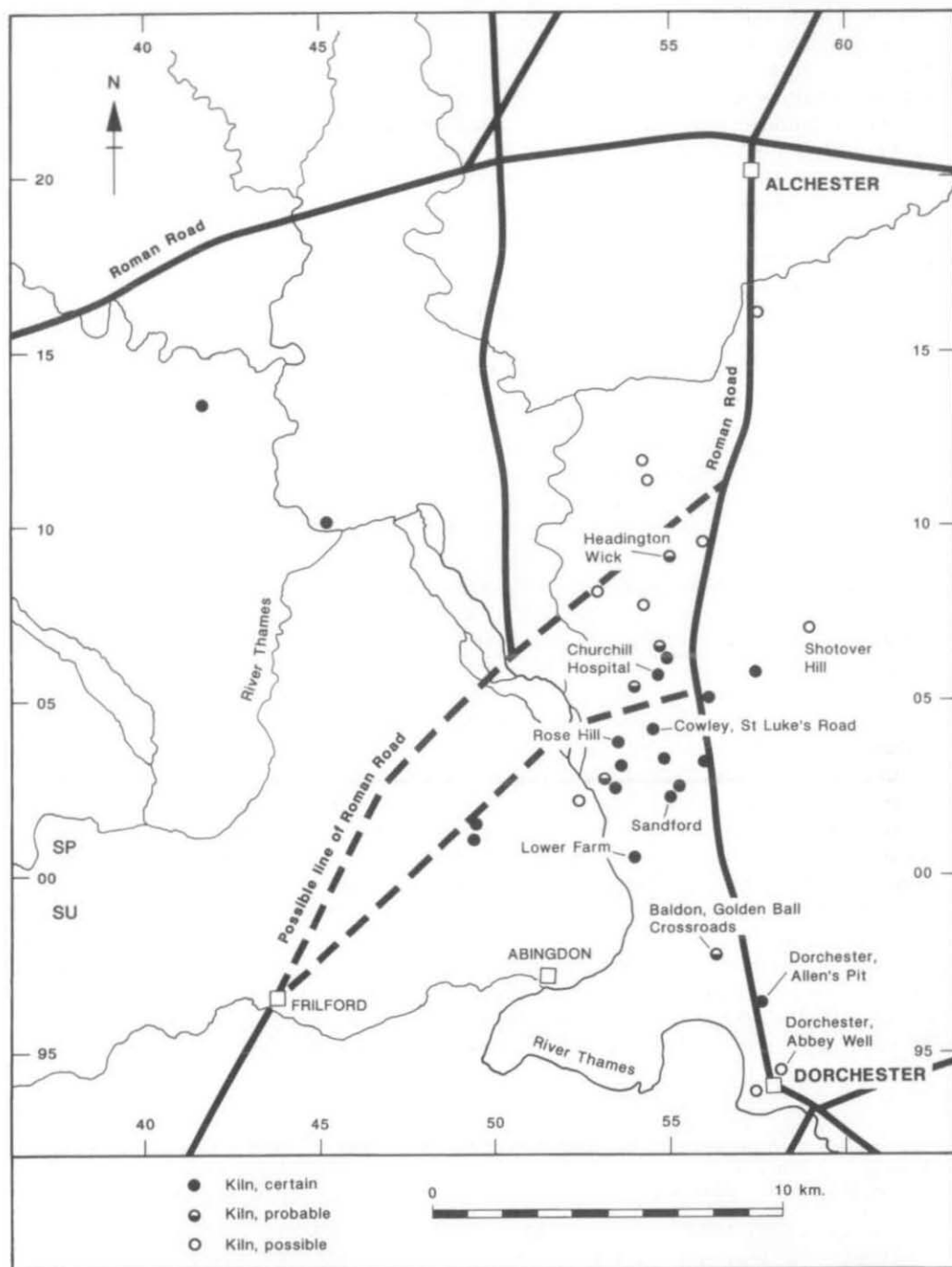


Fig. 50. Lower Farm, Nuneham Courtenay: distribution of Oxfordshire Roman kiln sites.

It can be assumed that access to woodland was an important factor in determining kiln locations. Roman pottery and tile production sites in Warwickshire, for instance, are virtually all on the edge of what later became the Forest of Arden.<sup>212</sup> It is extremely difficult, however, to assess the extent of woodland in the Upper Thames Valley during the Roman period as there is so little direct evidence available. It is generally assumed that clearance of the ancient forest had been widespread in the Neolithic and Bronze Ages.<sup>213</sup> The sheer density of kiln sites in the central area between Alchester and Dorchester, however, must surely argue for the survival of significant areas of woodland into the Roman period. Young has pointed to the evidence for Saxon woodland around Oxford, especially to the E.,<sup>214</sup> and the royal forests of Wychwood and Shotover may have been more extensive in Saxon and earlier times.<sup>215</sup>

The situation S. of Oxford is less clear, although it has been pointed out that 'there can be little doubt that it [i.e. woodland] has always been an important characteristic of the parish [of Nuneham Courtenay]'.<sup>216</sup> Smith's estate map of Nuneham Courtenay shows several substantial tracts of woodland, though admittedly these are mostly in the S. half of the parish.<sup>217</sup> It is impossible to extrapolate back to the Roman period from such evidence, and of course Lower Farm itself was part of the extensive open fields which dominated the N. half of the parish. One can do little more than assume that wood for fuel was to hand in sufficient quantities to maintain production at Lower Farm for 200 years or more.

Material sourcing, therefore, was an important but not absolutely deterministic attribute in the location of a production site. Access to markets, however, may have been more significant. The principal local markets would clearly have been at Alchester and Dorchester, with other centres such as Frilford, Abingdon and villas such as North Leigh, Shakenoak and Barton Court Farm also creating substantial local demand. Oxfordshire products, however, were marketed on a national level during the 3rd and 4th centuries. It is scarcely an accident, therefore, that most production sites lie between the road from Alchester to Dorchester and the river Thames. Most also lie within easy reach of the branch roads which converge on Frilford and continue thence to Wantage.

At first sight Lower Farm seems to lie in an awkward position in relation to the road system. The parish boundary between Sandford on Thames to the N. and Nuneham Courtenay and Toot Baldon to the S. may be of significance here. The boundary certainly dates back to the late Saxon period and, unlike most others in the region, it runs in a virtually straight line from the Thames to the Alchester-Dorchester road. Furthermore at the river end, the boundary coincides with an old channel rather than the current course. It is argued that the boundary represents the line of a Roman side road by which the kiln products could be transported both to local markets along the principal road, and to national markets either through the road system or along the Thames.<sup>218</sup>

<sup>212</sup> Paul Booth, pers. comm.

<sup>213</sup> e.g. '... in the Thames Valley woodland occupied only limited areas.' D. Miles, 'The Iron Age', in Briggs et al, op. cit. note 33, 50.

<sup>214</sup> Y, 12.

<sup>215</sup> Ibid., and see Briggs et al, op. cit. note 33, Map 18.

<sup>216</sup> *V.C.H. Oxon.* v, 234.

<sup>217</sup> Ibid., 235.

<sup>218</sup> The causeway to Lower Farm which runs along the parish boundary was sectioned during the pipelining works. No archaeological surfaces could be observed, but this may be due to post-medieval and later ploughing which has caused extensive truncation in the arable fields around Lower Farm.



It is difficult, if not impossible, to identify the products of individual kiln sites outside of specialised types and recognisable stamps because of the overall uniformity of fabric and form across the industry. The analysis of the Lower Farm pottery, however, has at least identified a number of early fine ware products which also appear in assemblages at Dorchester and Abingdon. It is perhaps only to be expected that the site's products should be marketed to the S. in the 2nd century at least, whereas one would expect the kilns in the Headington/Cowley area to dominate local trade to Alchester.

A related and intriguing aspect of marketing involves the use of stamps. In particular, the presence of a name-stamp common to Lower Farm and Headington Wick seems to be significant. The latter site need not be a production site, although this seems likely, but it may nevertheless be important in that green-glazed sherds and apparently colour-coated roughcast beakers were also found there. Again the circumstances of the 19th-century discovery of the site, and the apparent assumption that the glazed sherds were medieval, makes it difficult to evaluate the significance of the find, especially as the pottery cannot now be located. The conjunction of identical stamps and possible 2nd-century fine ware products at the two sites cannot be dismissed lightly, however, and there may have been a close relationship between the sites. Doubtless it would be pushing the point too far to suggest a common potter for these sherds on the available evidence, but it is worth remembering the potential for potters to travel, not only within but between industries.<sup>219</sup>

#### CHRONOLOGY AND PRODUCTION

Pottery production at Lower Farm seems to conform to the pattern for the Oxfordshire industry proposed by Young,<sup>220</sup> with one important exception. A start date of *c.* AD 100 is consistent with the early growth of the industry. Earlier production at Lower Farm cannot be ruled out entirely, but this is the best date on the available evidence. The importance of Lower Farm at this stage, however, is in its unique production of a varied suite of fine wares. The greatest volume of production was in the 3rd century, when a wide range of vessels was in mass production. Production appears to have declined in the first half of the 4th century, however, and there is very little evidence for continuity beyond AD 350. This is unusual, in that most other sites flourished in the first half of the 4th century, and many continued full production into the second half of the century.<sup>221</sup> Indeed at least one new site, Baldon, opened in the 4th century.<sup>222</sup> The industry as a whole may have continued to the end of the Roman period.<sup>223</sup> If the absence of late production at Lower Farm is real rather than a matter of sample bias or conservatism in the pottery – the former surely being more likely than the latter – the explanation presumably lies within the internal economic dynamics of the industry as a whole. A matter of that complexity lies beyond the scope of this report, although it is certainly to be hoped that future studies will address such problems.

<sup>219</sup> e.g. Swan, *op. cit.* note 62, 98–104; see especially Bird and Young, *op. cit.* note 141, for the Hartshill/Mancetter connection.

<sup>220</sup> Y, 231–41.

<sup>221</sup> Y, 239.

<sup>222</sup> *Ibid.*

<sup>223</sup> Y, 240–1.

## APPENDIX: CORRELATION OF YOUNG (1977) VESSEL TYPE NUMBERS WITH OAU RECORDING SYSTEM TYPE CODES

Young	OAU	Young	OAU	Young	OAU	Young	OAU	Young	OAU
M1	KA	M2	KA	M3	KA	M4	KA	M5	KA
M6	KA	M7	KA	M8	KE	M9	KA	M10	KB
M11	KB	M12	KB	M13	KD	M14	KD	M15	KD
M16	KD	M17	KE	M18	KE	M19	KE	M20	KE
M21	KE	M22	KE	M23	KE	P1	BA	P2	BA
P3	B	P4	B	P5	CD	P6	EH	P7	CD
P8	C	P9	CE	P10	E	P11	E	P12	E?
P13	F?	P14	JB	P15	JB	P16	JB	P17	JB
P18	IB	P19	IB	P20	HC	P21	HC	P22	IC
P23	HB	P24	HA	P25	HA	P26	HA?	P27	HA
P28	IA	P29	HC	P30	HC	P31	HC?	P32	HC?
P33	HD	P34	HD/MI	P35	HA	P36	MD	P37	HA?
P38	MG	P39	MF	P40	ME	W1	B	W2	B
W3	B	W4	B	W5	B	W6	B	W7	BB
W8	B(B)	W9	BB	W10	BB	W11	BB	W12	BB
W13	B	W14	B	W15	BA	W16	BA	W17	BB
W18	BA	W19	BA	B20	BA	W21	BA	W22	BA
W23	BB	W24	BB	W25	BD	W26	BD	W27	BD
W28	BD	W29	BC	W30	BD	W31	BC	W32	CD
W33	CD	W34	CD	W35	CD	W36	EA	W37	ED
W38	EC	W39	E	W40	E?	W41	HD	W42	JB
W43	JB	W44	IA	W45	HA?	W46	HA?	W47	IA
W48	JA	W49	JA	W50	I	W51	JB	W52	HC
W53	HA	W54	HC	W55	HC	W56	HA	W57	HA
W58	HD?	W59	HD/MI	W60	JB	W61	HC	W62	HC
W63	HC	W64	HC	W65	HC	W66	HC	W67	CC
W68	B	W69	CG	W70	MD	W71	?	W72	L
W73	M	W74	E	W75	H	BW1	C	BW2	C
WC1	B	WC2	CD	WC3	HA	WC4	KE	WC5	KE
WC6	KE	WC7	KE	C1	BA	C2	BA	C3	BA
C4	BA	C5	B	C6	B	C7	BA	C8	BA
C9	BA	C10	BA	C11	BB	C12	BC	C13	BC?
C14	BC	C15	BC	C16	CC	C17	CC	C18	CM
C19	CK	C20	EE	C21	EE	C22	E	C23	ED
C24	ED	C25	ED	C26	ED	C27	ED	C28	ED
C29	ED	C30	ED	C31	EE	C32	EE	C33	EE
C34	EE	C35	E	C36	ED?	C37	E	C38	FD
C39	E?	C40	JB	C41	JB	C42	JB	C43	JB
C44	HC	C45	HC	C46	HC	C47	JB?	C48	JB
C49	JB	C50	JB	C51	HC	C52	HC	C53	HC
C54	HC	C55	HC	C56	HC	C57	HC	C58	HC
C59	HC	C60	HC	C61	HC	C62	HC	C63	HC
C64	HC	C65	HC	C66	HC	C67	HC	C68	HC
C69	HC	C70	HC	C71	HC	C72	HC	C73	HD
C74	HD	C75	HD	C76	HD	C77	HD	C78	HD
C79	HD	C80	HD	C81	HA	C82	HA	C83	HA
C84	HA	C85	HA	C86	HA	C87	HD/MI	C88	FC
C89	FC	C90	HA	C91	HA	C92	HA	C93	HB
C94	JA	C95	H	C96	H	C97	KD	C98	KD
C99	KD	C100	KE	C101	CM/CD	C102	ED	C103	ED
C104	ED	C105	ED	C106	ED	C107	ED	C108	EE
C109	HC	C110	FA	C111	FA	C112	HD	C113	HD
C114	HD	C115	HD	C116	HA	C117	HA	C118	MG
C119	MF	01	BA	02	BA	03	BA	04	BA
05	BA	06	CC	07	CC	08	E?	09	CC
010	CD	011	C	012	C	013	CD	014	CK

Young	OAU	Young	OAU	Young	OAU	Young	OAU	Young	OAU
015	CD	016	CK	017	C	018	ED	019	E
020	EC	021	E	022	EF	023	EE	024	EE
025	?	026	?	027	HD	028	HD	029	HB
030	IA	031	HB/JA	032	JA	033	H	034	JA
035	JA	036	IA	037	JA	038	HA	039	HC
040	HC	041	JA	042	HA	043	FC	044	JB?
045	HC	046	H	047	HC	048	HC	049	HC
050	J	051	JB?	052	?	053	?	054	MD
055	MD	056	L	057	MF	058	MF	059	MG
R1	B	R2	B	R3	B	R4	BB	R5	B
R6	B	R7	BD	R8	B	R9	BC	R10	BC/CC
R11	B	R12	CC	R13	CC?	R14	CC	R15	CC
R16	CC	R17	CC	R18	CC	R19	CN	R20	CD
R21	CD	R22	CG	R23	CD	R24	CD	R25	CF
R26	CF	R27	CK	R28	CK	R29	EA	R30	C
R31	EH	R32	E	R33	CI	R34	EF	R35	E
R36	EE	R37	EE	R38	HD	R39	HD	R40	H
R41	HC	R42	H?	R43	HB(JA)	R44	HB	R45	HB
R46	HB(JA)	R47	HB(JA)	R48	JB	R49	JB	R50	IA
R51	JA	R52	JA(JB)	R53	JA	R54	IA	R55	JA
R56	HA	R57	HA	R58	HA?	R59	H	R60	JA
R61	IA	R62	FB	R63	H?	R64	HA	R65	FC
R66	FC?	F67	I	R68	HC	R69	HC	R70	HC
R71	IB	R72	JA	R73	HA?	R74	I	R75	H
R76	L	R77	MI	R78	MF	R79	MF	R80	MG
R81	M/Z								

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